QUARTERLY MONITORING AND REMEDIATION PROGRESS REPORT FOURTH QUARTER 2003

13500 Paxton Street, Pacoima, California

Prepared for:

Price Pfister, Inc.

14 January 2004

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14 January 2004

Mr. Mohammad Zaidi
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: Quarterly Monitoring and Remediation Progress Report – Fourth Quarter 2003
Price Pfister Facility
13500 Paxton Street, Pacoima, California
(EKI A20034.03)

Dear Mr. Zaidi:

On behalf of Price Pfister, Inc., Erler & Kalinowski, Inc. ("EKI") is pleased to submit this progress report for the Fourth Quarter 2003 for the Price Pfister facility located at 13500 Paxton Street in Pacoima, California (the "Site").

Summary of Fourth Quarter Monitoring: During the fourth quarter of 2003, Price Pfister conducted Site-wide groundwater and soil vapor monitoring, operation of *in situ* air sparging and soil vapor extraction systems in the Central Building P and Oil Staging Areas of the Site. Significant progress in remediation at the Site is being made with the removal of VOCs from soil and groundwater. Results of quarterly groundwater and soil vapor monitoring conducted during the fourth quarter 2003 continued to show reduced concentrations of tetrachloroethene ("PCE") and other volatile organic compounds ("VOCs") across the Site. In addition, data from off-Site and on-Site wells confirms that VOCs in groundwater from the former Holchem/Brenntag West, Inc. site have impacted Price Pfister.

Additional Field Activities: During the fourth quarter of 2003, additional field activities performed and summarized include:

- Installation, development and sampling of 10 new groundwater monitoring wells,
- Collection and analysis of soil samples from borings for the 10 new wells and an additional 11 soil borings,
- Installation and sampling of 11 new shallow soil vapor monitoring wells, and
- Collection and analysis of free hydrocarbon product ("FHP") samples.

Status of Groundwater Monitoring Program and Request for Modifications: The current status of analytical testing for the quarterly groundwater monitoring program and requests for modifications of the analytical testing are provided below. The modifications proposed herein supercede previous requests submitted to the RWQCB in EKI's *Quarterly Progress Report – Fourth Quarter 2002 and Request for Modification of Groundwater Sampling Program,* dated 3 March 2003, and *Quarterly Progress and Remediation Reports* for the Second and Third Quarters of 2003, dated 29 July 2003, and 14 October 2003, respectively.

For On-Site Wells:

- VOCs: Analysis for VOCs is ongoing for all Site groundwater monitoring wells and no change is proposed.

- Methyl tertiary butyl ether ("MTBE"): Analysis for MTBE is ongoing but EKI requests that analysis for MTBE be discontinued because MTBE has not been detected in eight consecutive monitoring events conducted to date.

- Metals, including hexavalent chromium: Analysis for metals, including hexavalent chromium is ongoing for all Site groundwater monitoring wells and no change is proposed.

- Cyanide: Analysis of cyanide is on-going but EKI requests that analysis for cyanide be discontinued because cyanide has not been detected in five consecutive monitoring events conducted to date.

- Total volatile petroleum hydrocarbons ("TVPH"): Analysis for TVPH has been discontinued beginning with the fourth quarter 2003, as agreed by the RWQCB staff during a Site visit on 16 October 2003.

- Total extractable petroleum hydrocarbons ("TEPH"): Analysis of TEPH is on-going but EKI requests that analysis for TEPH be discontinued for Site wells with the exception of wells in the Building A Area (i.e., MW-4 through MW-8 and PMW-14). TEPH has not been detected in Site groundwater monitoring wells during three consecutive quarterly events and detections prior to that were relatively low. Analysis for TEPH will be continued for wells near Building A because of the presence of free hydrocarbon product on groundwater at this location.

- Emergent chemicals: Analysis of 1,4-dioxane, 1,2,3-trichloropropane, perchlorate, and nitrosodiethylamine is being reviewed as part of an evaluation of

all emergent chemical sampling results for the Site. These results will be reported separately and include recommendations regarding future sampling for emergent chemicals in groundwater.

For Off-Site wells:

- Off-Site wells PMW-19 and PMW-20: EKI has requested off-Site wells PMW-19 and PMW-20 be analyzed for VOCs only. Analysis of groundwater samples from these wells for other compounds have either not been detected or, in the case of metals, do not appear to be at concentrations above typical background concentrations.

Progress of Site Remediation Activities: Soil vapor extraction and *in situ* air sparging activities have been conducted at the Site for approximately 15 months and 7 months, respectively. As a result of Site remediation activities, concentrations of tetrachloroethene ("PCE") and other VOCs across the Site have been significantly reduced. Approximately 2,030 pounds of VOCs have been removed from the subsurface by the SVE systems since September 2002. In addition, results of shallow groundwater sampling indicate that the IAS systems are removing VOC mass from the shallow saturated zone. PCE concentrations in groundwater, in each of the five wells monitored for IAS performance, have declined by 76 to 98 percent as compared with concentrations prior to start up.

An automated FHP recovery system is currently being installed. The new system will be operation in January 2004 and will allow collection of FHP from the existing FHP recovery wells at Building A.

Rebound Test: Currently, EKI is conducting a soil vapor and *in situ* air sparging rebound test at the Site. Sampling for the rebound tests are being performed pursuant to EKI's *Work Plan for Rebound Testing of Soil Vapor Extraction and In Situ Air Sparging Systems*, dated 16 December 2003. On 23 December 2003, the air sparging and soil vapor extraction systems were shut down and will remain off for a minimum of one month.

Request for RWQCB Actions: We would appreciate a response to the proposed modifications to the groundwater sampling program described above at your earliest convenience. The next quarterly groundwater sampling event is tentatively scheduled for the first week of February 2004, and we would like to implement the modified analytical program at that time, if approved.

In addition, we request a change of due date for submittal of all future quarterly progress and remediation reports from the 15th to the end of the month following the quarter. We request this change because of the large amount of data to be presented (i.e., soil vapor data from 96 soil vapor monitoring points and groundwater data from 30 groundwater monitoring wells). In addition, operational data for the SVE, IAS and FHP systems are summarized through the end of the quarter which allows insufficient time to summarize and analyze the data prior to the report due date.

If you have any questions regarding the information presented herein, please call Meg Mendoza or myself at (650) 292-9100.

Very truly yours,

ERLER & KALINOWSKI, INC.

Steven G. Miller, P.E.
Project Manager

cc: Lorraine Sedlak - Black & Decker
Eileen Nottoli - Allen Matkins

1 INTRODUCTION

This Quarterly Monitoring and Remediation Progress Report ("progress report") has been prepared by Erler & Kalinowski, Inc. ("EKI") on behalf of Price Pfister, Inc. ("Price Pfister"). This report presents a summary of activities at 13500 Paxton Street in Pacoima, California (the "Site") that occurred between October 2003 and December 2003 ("fourth quarter 2003"). The location of the Site is shown on Figure 1, and the layout of the Site, including identified detail areas of the Site and well locations, is shown on Figure 2.

This quarterly summary report is provided in accordance with a request from the Regional Water Quality Control Board, Los Angeles Region ("RWQCB") and includes a summary of the routine and non-routine activities performed at the Site during the fourth quarter 2003.

Routine activities performed during the fourth quarter of 2003 include:

- Quarterly groundwater monitoring (Section 3),
- Continued operation of two in situ air sparging ("IAS") systems in the Central Building P and Oil Staging Areas (Section 4),
- Quarterly soil vapor monitoring (Section 5),
- Continued operation of two soil vapor extraction ("SVE") systems in the Central Building P and Oil Staging Areas (Section 5), and
- Permitting for the automated free hydrocarbon product ("FHP") collection system at the Building A Area of the Site (Section 6).

Additional field activities performed during the fourth quarter of 2003 (Section 2) include:

- Installation, development, and sampling of 10 new groundwater monitoring wells to further assess groundwater in source areas and locations impacted by off-site releases.
- Installation and sampling of 11 new shallow soil vapor monitoring wells to assess volatile organic compounds ("VOCs") in shallow soil vapor in source areas.
- Collection and analysis of soil samples from 11 borings for a metals leaching study and to further characterize VOCs, semi-volatile organic compounds ("SVOCs"), total extractable petroleum hydrocarbons ("TEPH"), and chemicals referred to by the California Regional Water Quality Control Board ("RWQCB") as emergent chemicals (i.e., 1,4-dioxane, perchlorate, n-nitrosodiethylamine ("NDEA"), and 1,2,3-trichloropropane ("1,2,3-TCP").

- Collection and analysis of FHP samples from wells PMW-16, PMW-17, and PMW-18 to assess the FHP for the presence of NDEA.

- Testing of a bucket auger rig as a potential remedial measure for excavation of deep contaminated soil.

The additional field activities described above were undertaken in response to comments provided by the California Regional Water Quality Control Board, Los Angeles Region ("RWQCB") regarding the *Remedial Investigation* ("RI") *Report* (EKI, 2003k) and the *Redevelopment Remedial Action Plan* ("RAP"; EKI, 2003g). RWQCB comments on the RI Report and RAP were provided in letters dated 24 July 2003 (RWQCB, 2003a) and 15 August 2003 (RWQCB, 2003b), respectively (the "Comment Letters").

2 SUMMARY OF ADDITIONAL FIELD ACTIVITIES PERFORMED DURING FOURTH QUARTER 2003

As described in Section 1, the additional field activities conducted during the fourth quarter of 2003 included the following:

- Installation, development, and sampling of 10 new groundwater monitoring wells,
- Installation and sampling of 11 new shallow soil vapor monitoring wells,
- Collection and analysis of soil samples for a leaching study and evaluation of remediation goals, and
- Collection and analysis of FHP samples from wells PMW-16, PMW-17, and PMW-18.

The additional field activities are summarized in the following sections. The collection and analysis of FHP samples is summarized in Section 6.

2.1 Installation, Development, and Sampling of Groundwater Monitoring Wells

In accordance with the groundwater characterization activities proposed as Phase 1 in the *Saturated Zone Work Plan, 13500 Paxton Street, Pacoima, California* ("SZWP"; EKI, 2003d), 10 new groundwater monitoring wells (wells PMW-27 through PMW-36 shown on Figure 2) were installed at the Site. Of these 10 new wells, four (4) wells (wells PMW-28, PMW-30, PMW-31, and PMW-34) were completed as combination soil vapor and groundwater monitoring wells. Well construction details for all Site wells are presented on Table 1.

Groundwater monitoring well installation and development was conducted at the Site from 16 October 2003 to 31 October 2003. The field methods and procedures used while installing and developing these wells were similar to previous field activities. Details of the field activities, including drilling soil boreholes, soil sampling, well installation, and well development associated with the installation of these new wells will be presented in a separate report that will be submitted to the RWQCB in the first quarter of 2004. Groundwater samples from these new wells were collected during the fourth quarter 2003 monitoring event and the analytical results of these samples are included in Section 3 of this report.

In accordance with the SZWP, the new groundwater monitoring wells were installed to further define the on-Site lateral extent of chemicals of concern ("COCs") in groundwater. The location of each new groundwater monitoring well was reviewed with the RWQCB prior to installation and is described below:

- Well PMW-27 is located in the North Parking Area, up-gradient of the Central Building P Area and down-gradient of the Brenntag West, Inc. site ("Brenntag";

former Holchem, Inc./Chase Chemical site). This well location is intended to provide additional data for groundwater migrating onto the Price Pfister Site.

- Three wells (wells PMW-28, PMW-29 and PMW-30) are located near the former plating area and WWTS in the Central Building P Area, as requested by the RWQCB (RWQCB, 2003a). Well PMW-28 is located near a former clarifier where elevated concentrations of metals, VOCs, and petroleum hydrocarbons were detected in soil during previous investigations (see data from soil borings W-25 and W-26, sampled in December 2002; EKI, 2003k). Well PMW-29 is located near a former sump where elevated concentrations of hexavalent chromium were detected in soil (see data from soil boring W-17, sampled in December 2002; EKI, 2003k).
- Two wells (wells PMW-31 and PMW-32) are located near the former Delta degreasers in the Central Building P Area.
- Two wells (wells PMW-33 and PMW-34) are located in the Building L Area of the Site, as requested by RWQCB (RWQCB, 2003a).
- Well PMW-35 is located in the area between Buildings P and A.
- Well PMW-36 is located near the Sutter Street entrance to the Site to further delineate the distribution of COCs in groundwater at the Site, and to further assess the impact of chemical releases at the Brenntag facility on groundwater quality at the Price Pfister Site.

As described above, four (4) of the new wells (wells PMW-28, PMW-30, PMW-31, and PMW-34) were constructed as combination groundwater and soil vapor monitoring wells in the manner of the combination wells previously installed at the Site. Each combination groundwater and soil vapor monitoring well has four (4) 6-inch screen intervals placed at approximately 5, 20, 35, and 50 feet below ground surface ("ft bgs"). The deepest soil vapor screen is positioned approximately 5 feet above the top of the groundwater sampling screen (and approximately 10 feet above the groundwater table) and the other soil vapor screens are set at intervals of approximately 15 feet. Soil vapor monitoring wells were constructed in general accordance with methods described in the *Work Plan for Site Characterization and Soil Vapor Extraction Pilot Study* ("Work Plan"; EKI, June 2002a) and the RWQCB Los Angeles Region ("LARWQCB") and Department of Toxic Substances Control ("DTSC") *Advisory – Active Soil Gas Investigations* ("Active Soil Gas Investigations Guidance") (DTSC, 2003).

2.2 Installation and Sampling of New Shallow Soil Vapor Monitoring Wells

In response to the RWQCB's comments regarding VOC remediation of shallow soil at the Site, as described in the Comment Letters, eleven (11) new shallow soil vapor monitoring wells were installed at the Site. Five (5) new shallow soil vapor monitoring wells ("SVMWs") (wells SVMW-215 through SVMW-219 on Figure 2) were installed in the Central Building P Area and six (6) SVMWs (wells SVMW-220 through SVMW-225 on Figure 2) were installed in the Oil Staging Area. The SVMWs were installed in

general accordance with the Active Soil Gas Investigation Guidance. The sampling point of each of the new shallow SVMWs is set at approximately 5 feet bgs.

2.2.1 Installation of Shallow SVMWs

Shallow SVMW installation activities were conducted on 15 December 2003. EKI contracted with InterPhase Environmental, Inc. ("InterPhase") to perform drilling and installation of the shallow SVMWs. InterPhase used a truck-mounted GeoProbe® rig for drilling soil boreholes prior to installing each SVMW. No soil samples were collected from the boreholes.

After drilling the boreholes to approximately 6 feet bgs, a six-inch long stainless steel vapor monitoring screen was set at approximately 5 feet bgs. Each screen is connected to Teflon® tubing that extends to ground surface and terminates inside the well box. The end of the tube is capped with a vacuum rated fitting for purging and sampling. Approximately one-foot of Monterey #3-sized sand was placed in the borehole above and below each soil vapor sampling screen and the level of the sand was monitored using a weighted tape.

To seal each monitoring zone around the soil vapor sampling screen, an additional one-foot layer of finer-grained sand (#1C-sized) was placed above the initial sand pack, then an approximately one-foot thick layer of small (Size No. 8) bentonite chips was placed over the fine sand and hydrated in place. The upper 2 feet of the well was completed to ground surface with concrete. Each new SVMW was completed at grade in a traffic-rated steel utility box. No solvents or glues were used in the construction of these wells.

2.2.2 Sampling and Analysis of New Shallow SVMWs

The 11 new shallow SVMWs were sampled during the fourth quarter 2003 soil vapor monitoring round. Each new well was analyzed for VOCs on-Site using a mobile analytical laboratory. Analytical results of quarterly soil vapor monitoring are summarized in Section 5.7.

2.3 Collection and Analysis of Soil Samples

Soil samples were collected and analyzed from soil borings for the 10 new groundwater monitoring wells locations and from 11 other new soil boring locations for a metals leaching study and to further assess the presence of VOCs, SVOCs, TEPH, and emergent chemicals at the Site. These additional assessments were performed in response to comments in the RWQCB Comment Letters. The analytical results for metals in these soil samples were submitted to the RWQCB in the *Leaching Study and Evaluation of Remediation Goals for Metals in Soil, 13500 Paxton Street, Pacoima, California* ("Leaching Study Report"; EKI, 2003b). Details of the field activities, including drilling and sampling procedures, were included in EKI's Leaching Study Report. The Leaching Study Report also describes results of the bucket auger testing.

The analytical results for VOCs from these soil samples are presented herein (see Section 5.7.2). Results of additional soil sampling data (i.e., emergent chemical and TPH data) and will be presented in other reports in early 2004.

The results of soil sample analyses for emergent chemicals will be presented in a separate report, which will review all investigation data to date (i.e., soil, soil vapor, groundwater, and FHP) for emergent chemicals at the Site. The emergent chemical report will be submitted during the first quarter of 2004.

All other analytical data (i.e., SVOCs and TEPH) for soil samples collected during the fourth quarter of 2003 will be submitted in a report summarizing performance of Phase I activities as described in the *Saturated Zone Work Plan* (EKI, 2003d).

3 GROUNDWATER MONITORING – FOURTH QUARTER 2003

Groundwater monitoring at the Site is conducted in accordance with the *Work Plan for Site Characterization and Soil Vapor Extraction Study* (EKI, 2002a) and *Work Plan for Additional Investigations, Price Pfister Facility, 13500 Paxton Street, Pacoima, California* (EKI, 2002b). Groundwater monitoring has been conducted on a quarterly basis at the Site since March 2002.

Fourth quarter 2003 groundwater monitoring activities were conducted at the Site between 20 October 2003 and 3 November 2003 at a total of 30 wells, including the ten (10) new groundwater monitoring and combination soil vapor and groundwater monitoring wells installed during the fourth quarter of 2003 as described in Section 2. Currently, there are 28 groundwater monitoring and combination soil vapor and groundwater monitoring wells on-Site (wells MW-5 through MW-8, PMW-9 through PMW-15, and PMW-21 through PMW-36) and two (2) off-Site groundwater monitoring wells (wells PMW-19 and PMW-20). All of the wells are screened across the first encountered water table, except well PMW-21B, which is screened approximately 40 to 50 feet below the first encountered water table.

Fourth quarter 2003 groundwater monitoring field activities were performed by Blaine Tech Services, Inc. ("Blaine Tech") of Torrance, California.

On-Site wells MW-1, MW-2, MW-3, PMW-16, PMW-17, and PMW-18 are utilized for collection of FHP and are not sampled as part of the groundwater monitoring program. On-Site wells PIAS-1 through PIAS-13 are utilized as part of the IAS systems and are not sampled as part of the groundwater monitoring program.

On-Site monitoring wells A1 and A2 were installed in 1998 as part of the DTSC groundwater investigations for the Brenntag site and are not included as part of Price Pfister's sampling program. As shown on Figure 3, Brenntag is located approximately 500 feet north and hydraulically upgradient of the Site.

3.1 Groundwater Level Measurements

Blaine Tech measured depth to water in a total of 30 on-Site and off-Site wells on 5 November 2003. Well gauging at the Site was timed to coincide with the quarterly monitoring event taking place at Brenntag. Depth to groundwater measurements and groundwater elevations are presented in Table 2. Approximate groundwater elevation contours for November 2003 are illustrated on Figure 3. Groundwater elevation data for wells at the Brenntag site were obtained from Arcadis Geraghty & Miller ("AGM"). Measurement of depth to water data for wells A1 and A2 was performed by both EKI and AGM in order to calibrate water levels for contouring groundwater elevations Results of

the calibration indicate an adjustment of 0.06 feet between data obtained by EKI and AGM. This adjustment is presented for Brenntag data, shown on Figure 3.

As summarized in Table 2, groundwater elevations beneath most of the on-Site wells (i.e., in wells MW-4 through MW-7, PMW-9 through PMW-12, and PMW-22 through PMW-36) ranged between elevation 978.51 and 980.49 feet above mean sea level ("ft msl"). Depths to groundwater measured in these wells ranged between 54.82 ft bgs and 67.15 ft bgs. During the first 3 quarters of 2003, groundwater elevations for these wells have gradually decreased, with the exception of wells influenced by the IAS systems. However, for the fourth quarter monitoring event, groundwater elevations in a majority of the wells were slightly higher. Compared with the August 2003 monitoring event, changes in measured groundwater elevation in these wells ranged from -0.04 feet to +0.30 feet.

Groundwater elevations measured along the Louvre Street side of the Site (i.e., wells MW-8, PMW-13, PMW-14, and PMW-15 and off-Site to the southeast (i.e., wells PMW-19 and PMW-20) (see Figure 3) ranged between 961.14 and 964.56 ft msl. Depths to groundwater in these wells ranged between 64.71 and 72.93 ft bgs. The lower groundwater elevations recorded for wells located near Louvre Street as compared with the remainder of the Site may be due to the presence of faults or other subsurface features in this area. For reporting purposes, this feature is referenced as a fault. Groundwater elevations in these wells decreased between 0.06 and 0.32 feet as compared with the August 2003 event.

Figure 4 shows groundwater elevations over time for select wells located both northwest of the fault and southeast of the fault. The general trend over time is a decrease in groundwater elevation beneath the Site. Since September 2002, groundwater levels in wells located northwest of the fault have decreased by approximately 5 feet, while groundwater levels in well MW-8 located southeast of the fault have decreased by approximately 3 feet.

As shown on Figure 3, the overall direction of shallow groundwater flow beneath the majority of the Site is to the south-southeast, which is consistent with previous monitoring events performed at the Site. However, there appear to be localized variations in the gradient on the Site that may be due to the effects of the IAS and SVE systems or other causes. Based on November 2003 data, the magnitude of the groundwater gradient beneath Building P is relatively flat at approximately 0.0007 feet/foot. The groundwater gradient is slightly steeper at approximately 0.001 feet/foot south of Building P in the vicinity of Buildings A, B, and the Louvre Street Parking Lot. The magnitude of the groundwater gradient parallel to Louvre Street and Filmore Street is approximately 0.004 feet/foot, and the direction of the gradient is toward the southwest.

3.2 Collection of Groundwater Samples

Following measurement of depth to groundwater, Blaine Tech purged and sampled each monitoring well using its dedicated bladder pump. Wells were sampled in accordance with low flow purging and sampling procedures described in the previous work plans submitted to the RWQCB (EKI, 2002a, 2002b).

During purging of groundwater prior to collection of samples, field measurements of pH, temperature, conductivity, turbidity, dissolved oxygen, and oxidation-reduction potential were recorded at each well. These data are provided on well purge and sampling forms included in Appendix A.

At each monitoring well, groundwater samples were collected from the pump discharge in pre-cleaned containers supplied by the laboratory. The samples were labeled and stored in an ice-filled chest for delivery to the analytical laboratory. Groundwater samples were transported to a state-certified analytical laboratory using appropriate chain of custody documentation.

3.3 Analysis of Groundwater Samples

Analysis of quarterly groundwater samples collected at the Site is conducted in accordance with the Work Plan (EKI, 2002a) and subsequent modifications.

3.3.1 Summary of Modifications to Quarterly Groundwater Sampling Analysis

Modifications to quarterly groundwater sampling analyses implemented during the fourth quarter 2003 are summarized below:

Total Volatile Petroleum Hydrocarbons ("TVPH"): Analysis for TVPH was discontinued for the fourth quarter 2003 monitoring event in accordance with the Request for Modifications in the *Quarterly Monitoring and Remediation Progress Report – Third Quarter 2003, Price Pfister Facility, 13500 Paxton Street, Pacoima, California*, (EKI, 2003c), as agreed by RWQCB staff during a Site visit on 16 October 2003.

Emergent Chemicals: As requested by the RWQCB in their Comment Letters, quarterly groundwater samples were analyzed for the following emergent chemicals: 1,4-dioxane, 1,2,3-trichlorpropane, perchlorate, and n-nitrosodiethylamine. Selected emergent chemicals have been analyzed in prior events. The discussion provided below indicates both current and historic analytical methods, as appropriate.

- 1,4-Dioxane has been analyzed since initiation of the groundwater monitoring program (March 2002) using EPA Method 8260. During the third and fourth quarters of 2003, analysis of 1,4-dioxane was performed using a Gas Chromatography/Mass Spectrometer ("GC/MS") isotope dilution method to achieve a lower laboratory reporting limit (approximately 2 ug/L).

- 1,2,3-Trichloropropane ("1,2,3-TCP") has also been analyzed since initiation of the groundwater monitoring program (March 2002) using EPA Method 8260. During the fourth quarter 2003 monitoring event, 1,2,3-TCP was analyzed using a GC/MS Low Level Selected Ion Monitoring ("SIM") method to achieve a lower reporting limit (approximately 0.5 ug/L).

- Perchlorate was added to the monitoring program during the third quarter 2003 monitoring event. Analysis for perchlorate is performed using EPA Method 314.0.

- Nitrosodiethylamine ("NDEA") was added to the monitoring program for selected wells during the third quarter 2003 monitoring event. During that event, NDEA was analyzed using EPA Method 8270C as a tentatively identified compound in samples collected from wells in the Building A Area (wells MW-5, MW-6, MW-7, MW-8, and PMW-14). During the fourth quarter 2003 monitoring event, quarterly groundwater samples from all wells were analyzed for NDEA using EPA Method 8270C. The fourth quarter analysis also included nitrosodimethylamine ("NDMA").

Semivolatile Organic Compounds ("SVOCs"): Since analysis for 1,4-dioxane and NDEA is currently performed using EPA Method 8270C as described above, groundwater samples collected during the fourth quarter 2003 monitoring event were analyzed for the full suite of SVOCs. Analysis of groundwater samples for the full suite of SVOCs was a one-time event and will not be continued in subsequent quarterly events.

3.3.2 Analyses of Fourth Quarter 2003 Groundwater Samples

Samples of groundwater collected during the fourth quarter 2003 monitoring event were analyzed by Calscience Environmental Laboratories, Inc. ("Calscience") of Garden Grove, California.

Groundwater samples collected during the fourth quarter 2003 monitoring event were analyzed for one or more of the following:

- VOCs, including methyl tertiary-butyl ether ("MTBE") by U.S. Environmental Protection Agency ("EPA") Method 8260B,

- 1,2,3-TCP by the GC/MS Low Level method,

- SVOCs, including 1,4-dioxane and NDEA by EPA 8270C,

- TEPH with silica gel cleanup by EPA Method 8015M,

- seventeen metals by EPA Method 200.8 (including mercury by EPA Method 7470),

- hexavalent chromium by EPA Method 218.6,
- total cyanide by EPA Method 335.2, and
- perchlorate by EPA Method 314.0.

Samples collected during previous monitoring events were analyzed by a different analytical laboratory. The standard Calscience reporting limits for TEPH and cyanide are an order of magnitude higher than those obtained previously. For future monitoring events, a lower reporting limit will be requested for these two compounds. Field quality control samples were also collected and analyzed, including duplicate samples, trip blanks, field blanks, and filter blanks.

3.4 Analytical Testing Results

The results of laboratory analyses of groundwater samples are summarized in Tables 3 through 7, and discussed below. The following VOCs were detected in groundwater samples collected during the November 2003 sampling event: tetrachloroethene ("PCE"); 1,1,1-trichloroethane ("1,1,1-TCA"); trichloroethene ("TCE"); cis-1,2-dichloroethene ("cis-1,2-DCE"); and 1,1-dichloroethene ("1,1-DCE"); 1,1-dichloroethane ("1,1-DCA"); chloroform; trichlorofluoromethane ("TCFM"); 1,1,2-trichloro-1,2,2-trifluoroethane ("CFC-113"); MTBE; bromodichloromethane; dibromochloromethane; naphthalene; acetone; methylene chloride; tert-butyl alcohol ("TBA"); and 1,1,2,2-tetrachloroethane. Concentrations of VOCs detected in groundwater samples collected at the Site are included in Table 3. Primary VOCs (PCE, 1,1,1-TCA, TCE, cis-1,2-DCE, and 1,1-DCE) detected in groundwater samples collected during the fourth quarter 2003 monitoring event are presented on Figures 5 through 9. Analytical laboratory reports are included in Appendix B.

The groundwater analytical results presented in this report reflect the laboratory's method detection limits ("MDLs"). All previous reports have referenced the laboratory reporting limits ("RLs"). The MDL is the lowest concentration of an analyte that can be considered greater than zero at the 99 percent confidence level. The RL is the lowest concentration that is considered quantitatively meaningful. Analyte concentrations between the MDL and the RL are considered estimates, i.e., the laboratory is confident that the analyte is present but has less confidence in the quantitative measurement. This situation is typically indicated by the addition of a "J" flag to the analytical result.

3.4.1 VOCs in Shallow Groundwater

In the Central Building P Area, PCE was detected in fourth quarter 2003 groundwater samples collected from nine (9) wells screened across the water table (i.e., wells PMW-23 through PMW-25, PMW-26, and PMW-28 through PMW-32) at concentrations ranging from 4.9 ug/L in well PMW-32 to 130 ug/L in well PMW-25. These concentrations represent a further decline of PCE concentrations in these wells, compared to prior sampling events (e.g., PCE concentrations ranged between 11.2 ug/L and 225 ug/L during the third quarter 2003 sampling event). Maximum concentrations of the

other primary VOCs detected in the fourth quarter 2003 event in the Central Building P Area were detected in the sample collected from well PMW-26 as follows: 1,1,1-TCA at 5.1 ug/L, TCE at 22 ug/L, cis-1,2-DCE at 64 ug/L, and 1,1-DCE at 5.6 ug/L. These concentrations are consistent with those detected during the last quarterly event in August 2003, except for cis-1,2-DCE, which increased from 30.9 ug/L in August 2003 to 64 ug/L in October 2003. Concentrations of VOCs in wells PMW-23 through PMW-26 in the Central Building P Area have decreased significantly since these wells were first sampled in December 2003. It is likely that the remedial systems in the Central Building P area are remediating VOCs in shallow groundwater at this location.

Well PMW-35 is located downgradient of Central Building P and had detected concentrations of the primary VOCs as follows: PCE at 51 ug/L, 1,1,1-TCA at 1.0 ug/L, TCE at 8.3 ug/L, cis-1,2-DCE at 1 ug/L, and 1,1-DCE at 1.2 ug/L.

As shown on Figure 3, wells MW-4 through MW-8, and PMW-14 are in the vicinity of Building A and appear to be downgradient of Central Building P. PCE was detected in each of the wells at concentrations between 28 ug/l and 310 ug/l. The remaining primary VOCs were detected in some wells as follows: 1,1,1-TCA between 1.0 and 13 ug/L, TCE between 1.4 and 11 ug/L, cis-1,2-DCE at 8.8 ug/L and 11 ug/L in wells MW-5 and PMW-35 only, and 1,1-DCE between 1.2 and 9.8 ug/L. Fourth quarter 2003 analytical results are similar previous monitoring events.

In the Oil Staging Area, PCE was the only primary VOC detected above MDLs. PCE was detected at a concentration of 17 ug/L in well PMW-11 and 0.83 ug/L (estimated value) in well PMW-22. Given that concentrations of PCE in groundwater samples collected from wells PMW-11 and PMW-22 have decreased significantly (i.e., from maximum concentrations of 1,320 ug/L and 58.4 ug/L, respectively) since these wells were first sampled in late 2002, it is likely that the IAS system in the Oil Staging Area (see Section 4) is remediating VOCs in shallow groundwater at this area.

At well PMW-10, located in the southeastern corner of the Site in the Louvre Street Parking Area, concentrations of PCE at 5.7 ug/L, 1,1,1-TCA at 0.95 ug/L (estimated value), TCE at 0.83 ug/L (estimated value), and 1,1-DCE at 1.1 ug/L were detected in the fourth quarter 2003 groundwater sample. VOC concentrations in this well continue to decline, as compared with previous sampling rounds.

In wells located in the Building L Area (well PMW-12 and new wells PMW-33 and PMW-34), PCE and TCE were the only primary VOCs detected above laboratory RLs in fourth quarter 2003 groundwater samples. PCE was detected at 4.1 ug/L in well PMW-12, 1.4 ug/L in well PMW-33, and 0.78 ug/L (estimated value) in well PMW-34. TCE was detected only in well PMW-33 at an estimated concentration of 0.88 ug/L. Concentrations of PCE in groundwater samples collected from well PMW-12 have decreased significantly (i.e., from a maximum concentration of 59.4 ug/L) since this well was first sampled in late 2002.

At well PMW-9, located in the southern portion of the Site near Building D, concentrations of PCE at 39 ug/L, 1,1,1-TCA at 1.8 ug/L, TCE at 16 ug/L, cis-1,2-DCE at 0.85 ug/L (estimated value), and 1,1-DCE at 2.8 ug/L were detected in the fourth quarter 2003 groundwater sample. VOC concentrations detected in well PMW-9 in the fourth quarter 2003 are similar to those detected in the third quarter 2003 monitoring event.

At well PMW-13, located in the southern corner of the Site near Building J, concentrations of PCE at 170 ug/L, 1,1,1-TCA at 2.9 ug/L, TCE at 8.8 ug/L, cis-1,2-DCE at 6.1 and 1,1-DCE at 4.9 ug/L were detected in groundwater. VOC concentrations detected in well PMW-13 in the fourth quarter 2003 are similar to those detected in the third quarter 2003 monitoring event.

At new well PMW-36, located near the Sutter Street entrance to the Site, all five primary VOCs were detected above laboratory RLs in the fourth quarter 2003 groundwater sample. PCE was detected at a concentration of 11 ug/L, 1,1,1-TCA at 0.97 ug/L (estimated value), TCE at 11 ug/L, cis-1,2-DCE at 140 ug/L, and 1,1-DCE at 7.0 ug/L.

With the addition of new well PMW-27, there are currently three (3) on-Site upgradient wells (wells PMW-27, A1, and A2) located on the northwestern portion of the Site in the North Parking Lot. Wells A1 and A2 are sampled by Brenntag as discussed above. Analytical results obtained from Arcadis Geraghty & Miller through the third quarter of 2003 for wells A1 and A2 are also included in Tables 3 through 7. As shown in Table 3 and on Figures 5 through 9, the maximum concentrations of primary VOCs detected in these upgradient wells have consistently been detected in well A2. In samples collected from well A2 in August 2003, PCE was detected at a concentration of 100 ug/L, 1,1,1-TCA at 55 ug/L, TCE at 100 ug/L, cis-1,2-DCE at 7,900 ug/L, and 1,1-DCE at 180 ug/L, along with other VOCs. At new well PMW-27, four of the five primary VOCs were detected above laboratory RLs as follows: PCE at 47 ug/L, 1,1,1-TCA at 7.3 ug/L, TCE at 11 ug/L, and 1,1-DCE at 4.5 ug/L. Only PCE, at a concentration of 2.4 ug/L, was detected in samples collected from well A1 in August 2003.

3.4.2 VOCs in Deeper Groundwater

PCE was detected at a concentration of 4.8 ug/L in the fourth quarter 2003 groundwater sample collected from well PMW-21B, which is screened approximately forty to fifty feet below the water table. This detection of PCE is consistent with previous sampling results. No other VOCs have been detected in this well during the four sampling events conducted at this location.

The IAS wells, which are also screened below the first encountered groundwater table as described in Section 4, were not sampled during the fourth quarter 2003 monitoring event because the IAS systems were operational during the sampling event.

3.4.3 Emergent Chemicals in Groundwater

At the request of the RWQCB, fourth quarter 2003 groundwater samples were analyzed for the following emergent chemicals: 1,4-dioxane, 1,2,3-TCP, perchlorate, and NDEA. In addition, samples were analyzed for NDMA. Analytical results for these emergent chemicals are summarized below. The presence of these emergent chemicals will be discussed in more detail in a separate report to be submitted to the RWQCB in the first quarter of 2004. The results of analyses of groundwater for emergent chemicals are summarized in this section.

During the fourth quarter 2003 monitoring event, 1,4-dioxane was not detected above the laboratory MDL in samples collected from the 30 Site monitoring wells. The MDL for 1,4-dioxane was 0.57 ug/L.

During the fourth quarter 2003 monitoring event, groundwater samples from all 30 Site wells were analyzed for 1,2,3-TCP using a GC/MS low level method. 1,2,3-TCP was detected in well PMW-13 at a concentration of 0.0062 ug/L. Estimated concentrations of 1,2,3-TCP were detected in 10 Site wells during this event at concentrations ranging between 0.00088 ug/L and 0.0049 ug/L. 1,2,3-TCP was not detected in the remaining 19 Site wells. There is no history of 1,2,3-TCP use at the Site and these potential detections do not appear consistent with an on-Site source.

During the fourth quarter 2003 monitoring event, perchlorate was detected in two groundwater monitoring wells (PMW-28 and PMW-29) at concentrations of 2.3 ug/L and 2.9 ug/L, respectively. Estimated concentrations of perchlorate below the laboratory RL of 2 ug/L and above the MDL of 0.46 ug/L were detected in twelve Site monitoring wells at concentrations ranging between 0.59 ug/L and 1.9 ug/L. Perchlorate was not detected in the remaining 16 Site monitoring wells. Results of groundwater analyses for perchlorate with detections near and below the RL suggest that detections of perchlorate very near laboratory RLs are likely due to false positive readings. There is no history of perchlorate use at the Site and these results are consistent with no know use of perchlorate.

During the fourth quarter 2003 monitoring event, groundwater samples collected from all 30 Site monitoring wells (MW-4 through MW-8; PMW-9 through PMW-15; PMW-19 through PMW-35) were analyzed for NDEA using EPA Method 8270C. NDEA was not detected in any of the 30 groundwater samples analyzed above its laboratory MDL of 2.81 ug/L during this event. Groundwater samples collected during this event were also analyzed for NDMA; no NDMA was detected above its MDL of 1.1 ug/L during this event.

3.4.4 SVOCs in Groundwater

As described above, analysis for a full suite of SVOCs was performed as a one-time event on samples collected during the fourth quarter 2003. Concentrations of SVOCs detected in fourth quarter 2003 groundwater samples are summarized in Table 5. No

SVOCs were detected above laboratory RLs in any of the 30 site wells. Only estimated concentrations (i.e., above the laboratory MDL but below the laboratory RL) of two SVOCs were detected. As shown in Table 5, butyl benzyl phthalate was detected at 3.2 ug/L (estimated value) in the fourth quarter 2003 groundwater sample collected at well PMW-27 and 4-nitrophenol was detected at a maximum concentration of 3.3 ug/L (estimated value) in five wells (wells MW-8, PMW-19, PMW-21B, PMW-23, and PMW-35).

3.4.5 Petroleum Hydrocarbons in Groundwater

Concentrations of TEPH detected in groundwater are summarized in Table 6. TEPH was not detected in any of the groundwater samples collected during this event at a RL of 430 ug/L. Sampling from previous quarterly events indicate TEPH is generally not present in Site wells above 50 ug/L. As discussed above, a lower RL will be requested for future TEPH analyses.

3.4.6 Inorganic Compounds

Groundwater samples collected during the fourth quarter 2003 monitoring event at the Site contained detectable levels of several metals and the analytical results are included in Table 7. Antimony, barium, total chromium, cobalt, copper, molybdenum, nickel, selenium, vanadium, and zinc were generally detected at low concentrations similar to previous events.

Hexavalent chromium was detected in Site groundwater wells at concentrations ranging between 0.27 ug/L (in new well PMW-34) and 13 ug/L (in well PMW-13). The detected concentrations of hexavalent chromium are similar to those detected in previous sampling events. Total chromium concentrations detected in fourth quarter 2003 groundwater samples ranged between 0.529 ug/L (estimated value) in well PMW-34 and 15 ug/L in well PMW-26.

Cyanide was not detected above the MDL of 47 ug/L in any of the groundwater samples analyzed during the fourth quarter 2003 sampling event. Cyanide has not been detected in groundwater samples collected during any of the five previous consecutive quarterly monitoring events conducted at the Site above a RL of 5 ug/L. As discussed above, a lower RL will be requested for any future cyanide analyses.

3.5 Field Quality Control Sample Results

Several field quality control samples were collected and analyzed during the fourth quarter 2003 groundwater monitoring event at the Site, including duplicate groundwater samples submitted "blind" to the analytical laboratory, field blanks, filter blanks, and trip blanks. Results of field quality control sample analyses are included in Tables 3 through 7. Analytical laboratory reports are presented in Appendix B.

3.5.1 Duplicate Samples

Duplicate samples were collected in series from the same well using the same sampling method, and were submitted "blind" (location of the sample collected was not known to the laboratory) to the laboratory for chemical analyses. One duplicate sample was collected during each day of sampling. Duplicate groundwater samples were collected from wells MW-7, PMW-12, PWM-21B, PMW-25, PMW-27, PMW-30, and PMW-33, and analyzed for one or more of the following compounds: VOCs, SVOCs, TEPH, metals and hexavalent chromium, 1,4-dioxane, 1,2,3-TCP, perchlorate, and NDEA.

3.5.2 Field Blanks

Field blanks for water samples were collected in the field during the fourth quarter 2003 monitoring event using deionized water supplied by the analytical laboratory or distilled water supplied by Blaine Tech. One field blank was collected during each day of groundwater sampling (samples FB-1 through FB-7) and analyzed for VOCs and four emergent chemicals (1,4-dioxane, 1,2,3-TCP, perchlorate, and NDEA).

In field blank samples FB-1, FB-3, and FB-6, the analytical laboratory reported estimated concentrations of methylene chloride above the MDL but below the RL. Methylene chloride, a common lab contaminant, was also detected in the associated laboratory method blank. In field blank samples FB-2 and FB-4, the analytical laboratory reported estimated concentrations of methylene chloride above the MDL but below the RL and methylene chloride was not detected in the associated laboratory method blank.

In field blank sample FB-6, the analytical laboratory reported an estimated concentration of acetone above the MDL but below the RL. Acetone, also a common lab contaminant, was detected in the associated laboratory method blank. In field sample FB-4, CFC-113 was detected at a concentration of 1.6 ug/L.

3.5.3 Filter Blanks

Filter blanks for water samples were collected in the field using deionized water supplied by the analytical laboratory and pumped through a clean, unused filter. One filter blank was collected during each day of groundwater sampling (Filter-1 through Filter-7) and analyzed for metals and hexavalent chromium only. Each of the filter blanks contained detectable concentrations of the following metals:

- antimony from 0.43 ug/L (estimated value) to 1.21 ug/L,
- barium from 2.20 to 19.8 ug/L,
- chromium from 0.561 ug/L (estimated value) to 4.22 ug/L,
- hexavalent chromium from 0.14 ug/L (estimated value) to 0.19 ug/L (estimated value),
- cobalt from 0.0192 ug/L (estimated value) to 0.0634 ug/L (estimated value),
- copper from 0.131 ug/L (estimated value) to 0.587 ug/L (estimated value),
- lead from 0.0182 ug/L (estimated value) to 0.102 ug/L (estimated value),

- molybdenum at 0.521 ug/L (estimated value),
- nickel from 0.0662 ug/L (estimated value) to 0.29 ug/L (estimated value),
- selenium at 1.19 ug/L,
- silver at 0.028 ug/L (estimated value),
- thallium from 0.0334 ug/L (estimated value) and 0.0698 ug/L (estimated value), and
- zinc from 2.72 ug/L (estimated value) to 40.6 ug/L.

3.5.4 Trip Blanks

At least one trip blank obtained from the analytical laboratory was submitted with each cooler of samples delivered to the analytical laboratory. Trip blanks (TB-1 through TB-11) were analyzed for VOCs.

In trip blank samples TB-1 through TB-4, the analytical laboratory reported concentrations of methylene chloride ranging from 1.8 ug/L (estimated value) to 3.3 ug/L (estimated value). Methylene chloride, a common lab contaminant, was also detected in two of the associated laboratory method blanks.

In trip blank samples TB-1 and TB-2, the analytical laboratory reported a concentration of MTBE at 3.4 ug/L (estimated value) in each sample. MTBE was also detected in the associated laboratory method blanks.

In field sample TB-7, CFC-113 was detected at a concentration of 1.7 ug/L.

3.6 Laboratory QA/QC Samples

Standard laboratory QA/QC procedures used for the project included analyses of surrogates, matrix spikes, matrix spike duplicates, laboratory quality control check samples, and method blanks. The percent recoveries of the surrogate, matrix spike, matrix spike duplicate, and the laboratory quality control check samples were within acceptable ranges.

The method blanks for some sample batches contained detectable concentrations (all concentrations except for three methylene chloride detections are estimated or "J" flag concentrations) of some analytes. VOCs detected in method blanks include acetone (4.9J ug/L), methylene chloride (1.7J to 4.9 ug/L), MTBE (0.32J ug/L), naphthalene (0.59J and 1.7J ug/L), xylenes (0.20J ug/L), 1,2,3-trichlorobenzene (0.47J ug/L), and 1,2,4-trichlorobenzene (0.39J ug/L). Metals detected in method blanks include arsenic (0.33J ug/L), chromium (0.023J to 0.13J ug/L), hexavalent chromium (0.18J ug/L), copper (0.28J ug/L), selenium (0.79J to 0.89J ug/L), vanadium (0.019J to 0.025J ug/L), and zinc (0.37J to 0.46J ug/L). Refer to laboratory reports provided in Appendix B to correlate detections of analytes in method blank samples with groundwater samples from the same batch. With the exception of methylene chloride, the chemicals detected in some method blanks are due to the lower limit of reporting associated with the MDL rather than the

RL. These detections should not adversely impact the use of the data for Site characterization purposes.

The laboratory MDL and RL for these compounds are presented below:

Analyte	MDL (ug/L)	RL (ug/L)
VOCs		
Acetone	3.6	25
Methylene chloride	1.7	2.0
MTBE	0.28	1.0
Naphthalene	0.56	10
Xylenes	0.17	1.0
1,2,3-trichlorobenzene	0.40	1.0
1,2,4-trichlorobenzene	0.28	1.0
Metals		
Arsenic	0.17	0.50
Chromium, total	0.018	1.0
Chromium, hexavalent	0.005	0.20
Copper	0.018	1.0
Selenium	0.78	1.0
Vanadium	0.016	1.0
Zinc	0.34	5.0

3.7 Proposed Modifications to the Groundwater Sampling Program

The current status of analytical testing for the quarterly groundwater monitoring program and requests for modifications of the analytical testing are provided below. The modifications proposed herein supercede previous requests submitted to the RWQCB in EKI's *Quarterly Progress Report – Fourth Quarter 2002 and Request for Modification of Groundwater Sampling Program,* dated 3 March 2003, and *Quarterly Progress and Remediation Reports* for the Second and Third Quarters of 2003, dated 29 July 2003, and 14 October 2003, respectively.

For On-Site Wells:

- VOCs: Analysis for VOCs is ongoing for all Site groundwater monitoring wells and no change is proposed.

- Methyl tertiary butyl ether ("MTBE"): Analysis for MTBE is ongoing but EKI requests that analysis for MTBE be discontinued because MTBE has not been detected in eight consecutive monitoring events conducted to date.

- Metals, including hexavalent chromium: Analysis for metals, including hexavalent chromium is ongoing for all Site groundwater monitoring wells and no change is proposed.

- Cyanide: Analysis of cyanide is on-going but EKI requests that analysis for cyanide be discontinued because cyanide has not been detected in five consecutive monitoring events conducted to date.

- Total volatile petroleum hydrocarbons ("TVPH"): Analysis for TVPH has been discontinued beginning with the fourth quarter 2003, as agreed by the RWQCB staff during a Site visit on 16 October 2003.

- Total extractable petroleum hydrocarbons ("TEPH"): Analysis of TEPH is on-going but EKI requests that analysis for TEPH be discontinued for Site wells with the exception of wells in the Building A Area (i.e., MW-4 through MW-8 and PMW-14). TEPH has not been detected in Site groundwater monitoring wells during three consecutive quarterly events and detections prior to that were relatively low. Analysis for TEPH will be continued for wells near Building A because of the presence of free hydrocarbon product on groundwater at this location.

- Emergent chemicals: Analysis of 1,4-dioxane, 1,2,3-trichloropropane, perchlorate, and nitrosodiethylamine is being reviewed as part of an evaluation of all emergent chemical sampling results for the Site. These results will be reported separately and include recommendations regarding future sampling for emergent chemicals in groundwater.

For Off-Site wells:

- Off-Site wells PMW-19 and PMW-20: EKI has requested off-Site wells PMW-19 and PMW-20 be analyzed for VOCs only. Analysis of groundwater samples from these wells for other compounds have either not been detected or, in the case of metals, do not appear to be at concentrations above typical background concentrations.

4 IN SITU AIR SPARGING

In May 2003, two in situ air sparging ("IAS") systems were installed in the Central Building P and Oil Staging Areas of the Site in accordance with the *Work Plan for In Situ Air Sparging* ("IAS Work Plan"; EKI, 2003d). Operation of these systems began on 4 June 2003 and continued until 23 December 2003, when operation was shut down in along with the SVE systems for performance of a rebound test. A summary of activities associated with startup of the IAS systems is presented in the *Quarterly Monitoring and Remediation Progress Reports for the second and third quarters of 2003,* (EKI, 2003e, 2003c).

Through December 2003, the IAS systems have operated for a total of 7 months. This progress report summarizes IAS systems operations for the time period between 1 October 2003 and 23 December 2003.

4.1 Description of the IAS Systems

4.1.1 Air Injection Systems

A simplified process and instrumentation diagram for the IAS systems is included with the SVE system diagram as Figure 10. The primary components of each IAS system are similar; each consists of a network of six to seven IAS wells and a compressed air system for each IAS system and are described further in the *Quarterly Monitoring and Remediation Progress Reports* for the first and second quarters of 2003 (EKI, 2003f, 2003e).

4.1.2 Description of the Central Building P Area IAS System

The layout of the Central Building P Area IAS system is shown on Figure 11. A total of seven IAS wells were installed in the Central Building P Area (PIAS-1, PIAS-2, PIAS-3, PIAS-4, PIAS-5, PIAS-6, and PIAS-13). Wells PIAS-2, PIAS-3, PIAS-4, PIAS-5, and PIAS-6 are screened approximately 85 to 90 ft bgs (or approximately 954 to 959 ft msl). Wells PIAS-1 and PIAS-13 were screened above a silty layer encountered from approximately 71 to 76 ft bgs (or approximately 970 to 975 ft msl), allowing for air injection above the silt layer. Groundwater is generally encountered at approximately 60 to 62 ft bgs or 979 to 981 ft msl.

4.1.3 Description of Oil Staging Area IAS System

The layout of the Oil Staging Area IAS system is shown on Figure 12. Six IAS wells were installed in the Oil Staging Area (PIAS-7, PIAS-8, PIAS-9, PIAS-10, PIAS-11, and PIAS-12). All six wells are screened from approximately 950 to 955 ft msl. Wells PIAS-7, PIAS-8, PIAS-9, PIAS-10, and PIAS-11 are screened approximately 84 to 89 ft bgs. Well PIAS-12 is screened from approximately 89 to 94 ft bgs because the ground

surface elevation is approximately five feet higher in this location. Groundwater is generally encountered at approximately 58 to 61 ft bgs in this area of the Site.

4.1.4 Operation of IAS System in Central Building P Area

The IAS system at Central Building P has been operational since 4 June 2003. During this reporting period, the complete system consisting of seven IAS wells has been operating at full capacity since 5 November 2003, with each well operational for 6 hours every day. During October 2003 the system was only operational for approximately 80 hours due to a reoccurring problem with a pressure release valve and associated overheating of the compressor. The proper repairs were performed on 5 November 2003.

4.1.5 Operation of IAS System at Oil Staging Area

The IAS system in the Oil Staging Area has been operational since 4 June 2003. During this reporting period the system has operating at full capacity, with each well operational for 8 hours every day with the exception of shutdowns due to full SVE vapor drums for approximately 14 hours between 5 November and 6 November 2003, 6 hours on 18 November 2003, and 4 hours on 15 December 2003. Additionally, there were two outages for unknown reasons for approximately 100 hours between 28 November and 1 December 2003, and 10 hours between 10 December and 11 December 2003. PIAS-3 was not operational for approximately one week during November 2003 and PIAS-9 was not operational for approximately 2 weeks during December 2003.

4.2 Monitoring and Inspection of Systems

Since startup of operations, both systems have been monitored and inspected on a weekly basis by Drewelow Engineering of Cardiff, California. Monitoring consists of recording operational data such as air compressor discharge temperatures and flow rates as well as injection flow rates and pressures. System inspection entails examination of the different segments of piping and airline hose as well as hose connections, wellhead piping, and electrical connections. Field monitoring data for the Central Building P and Oil Staging IAS systems are presented on Tables 8 and 9, respectively. Operational data sheets for both systems are presented in Appendix C.

4.3 Groundwater Monitoring During IAS Operation

The effect of the IAS systems now in place at the Site can be evaluated using both VOC concentrations in groundwater at the Central Building P and Oil Staging Areas as well as the amount of dissolved oxygen found in groundwater in these areas during operation of the IAS systems.

4.3.1 Monitoring of Groundwater VOC Concentrations

The IAS systems were designed to reduce the mass and dissolved concentrations of PCE in groundwater specifically in the Central Building P and Oil Staging Areas. To monitor

the effectiveness of IAS operations, monitoring of VOC concentrations in groundwater samples from wells in the vicinity of the two systems is being performed.

In Central Building P, sampling of wells PMW-23, PMW-24, and PMW-25 are being used to track the progress of cleanup. In the Oil Staging Area, analytical results from wells PMW-11 and PMW-22 are being used to track the progress of cleanup. Collection and analysis of groundwater samples from these wells occurred prior to the start of air sparging, and at two, four, eight, and twelve weeks after startup of the systems, as presented in the previous *Quarterly Monitoring and Progress Report* (EKI, 2003c). These wells were sampled during the fourth quarter monitoring event as part of the quarterly groundwater monitoring event, approximately 6 months after start of IAS operations.

Analytical results are summarized in Table 3 and on Figures 5 through 9. Additionally, the concentration of PCE in each of the wells listed above with time is plotted on Figures 13 through 17.

4.3.1.1 Central Building P Area

VOC concentrations in groundwater have continued to decline in wells located near the Central Building P IAS system. Concentrations of PCE in wells PMW-23, PMW-24, and PMW-25 have decreased between May and October 2003 as follows: 513 ug/L to 7.6 ug/L; 82.9 ug/L to 12 ug/L; and 540 ug/L to 130 ug/L, respectively.

Concentrations of dissolved oxygen ("DO") in groundwater are routinely measured during purging of groundwater monitoring wells prior to sampling. Since operation of the IAS systems entails injecting air into the groundwater, DO concentrations should increase in groundwater within the area of influence of the injection wells. DO concentrations in wells PMW-23, PMW-24, and PMW-25 have increased between May and October 2003 as follows: 4.49 to 8.96 mg/L; 3.73 to 6.06 mg/L; and 4.53 to 4.71 mg/L, respectively. As expected, DO concentrations in well PMW-25, located furthest from the IAS system, show the lowest increase in DO.

4.3.1.2 Oil Staging Area

VOCs concentrations in groundwater have continued to decline in wells located near the Oil Staging Area. Concentrations of PCE in well PMW-11 have decreased between May and October 2003 from 135 ug/L to 17 ug/L. PCE was detected in well PMW-22 in May 2003 at a concentration of 4.12 ug/L, but has not been detected in any subsequent sampling events.

DO concentrations in wells PMW-11 and PMW-22, have increased between May and October 2003 as follows: 5.20 to 8.13 mg/L; and 5.65 to 9.71 mg/L; respectively. DO concentrations measured during monitoring events following start of IAS operation were approximately twice as high as prior to start-up.

4.4 Plans for Continued IAS Systems Operation

The IAS systems were shutdown on 23 December 2003 to begin rebound testing. The IAS systems will remain off for a minimum of one month while rebound testing is performed. When rebound testing is completed and the analytical data evaluated, a recommendation will be made to the RWQCB either (a) to cease operation of the IAS systems or (b) to continue operation of the systems.

5 SOIL VAPOR EXTRACTION

In August 2002, two SVE systems were constructed at the Site in accordance with the Work Plan (EKI, 2002a) and South Coast Air Quality Management District ("SCAQMD") permits. The SVE systems are located at the Central Building P and the Oil Staging Areas of the Site (see Figures 2, 11, and 12). Continuous operation of these systems began on 20 September 2002. The systems were shut down from 22 December 2002 through 14 January 2003 to perform rebound testing. The systems operated continuously between 15 January 2003 and 23 December 2003, at which time the systems were shut down for performance of another rebound test. A summary of activities associated with the startup of the SVE systems, operation during the first four months, and rebound testing performed were presented in the *Startup Report for Soil Vapor Extraction Pilot Study* ("Startup Report"; EKI 2003i). Routine SVE operations for the first, second and third quarters of 2003 were presented in the *Quarterly Monitoring and Progress Report,* (EKI, 2003f, 2003e, 2003c).

This progress report summarizes SVE systems operations for the time period between 1 October 2003 and 23 December 2003. The most recent monitoring data, as reported herein, is from December 2003, which represents approximately 15 months of system operation.

5.1 Description of the Soil Vapor Extraction Systems and Associated Wells

5.1.1 Soil Vapor Extraction and Treatment Systems

A total of seven soil vapor extraction wells are utilized for the two SVE systems at the Site. Four SVE wells were installed in Central Building P (PSVE-1 through PSVE-4) and three SVE wells were installed in the Oil Staging area (PSVE-5, PSVE-6, and PSVE-7). All SVE wells are screened from approximately 35 to 55 ft bgs). The Central Building P and Oil Staging area SVE systems are independent systems with no shared equipment. SVE well locations and SVE system layouts for the Central Building P and the Oil Staging Areas are shown on Figures 11 and 12, respectively.

Both SVE systems have the same general design. A simplified process and instrumentation diagram for the SVE systems (and the IAS systems, as discussed in Section 4) is presented on Figure 10.

As of 21 August 2003, the SVE systems are no longer operating under variable sites SCAQMD permits. These systems are operating under SCAQMD permit numbers F62841 A/N 416492 and F6842 A/N 416493 for the Price Pfister site.

5.1.2 Soil Vapor Monitoring Wells

Thirty-seven (37) soil vapor monitoring wells have been installed at the Site. Each vapor monitoring well has between one and four six-inch long vapor monitoring screens.

Nineteen of the wells (SVMW-201 through SVMW-214 and PMW-9 through PMW-12) contain three probes that were located approximately 15, 30, and 45 feet above the groundwater table at the time of installation. Three vapor monitoring wells located along the southern property boundary (wells PMW-13, PMW-14, and PMW-15) have a fourth probe located approximately 60 feet above the groundwater table due to a steep drop in the groundwater table along this property boundary. Four vapor monitoring wells (PMW-28, PMW-30, PMW-31, and PMW-34) contain four probes that are located approximately 5, 20, 35, and 50 feet below ground surface. Eleven of the monitoring wells (SVMW-215 through SVMW-225) contain one probe located approximately 5 feet below ground surface. Fourteen of the vapor monitoring wells (SVMW-201 through SVMW-214) were constructed solely to monitor vapor concentrations. Seven wells (PMW-9 through PMW-15) are combination soil vapor/groundwater monitoring wells, and one well (PMW-17) is a combination soil vapor monitoring/FHP collection well. Vapor monitoring well locations are presented on Figure 2.

All soil vapor monitoring wells at the Site were sampled between 15 and 22 December 2003, and results of this sampling are discussed in Section 5.7.1.

5.2 Operation and Monitoring of the SVE Systems

All seven SVE wells operated continuously throughout this reporting period (i.e., between 1 October 2003 and 23 December 2003). Operation and maintenance of the SVE systems is performed by Drewelow Engineering.

Weekly monitoring of the SVE systems consists of the following activities:

- Field analysis of VOC concentrations in extracted vapors at multiple points through the SVE system using a photoionization detector ("PID") or flame ionization detector ("FID");
- Measurement of air flow rate for each SVE well, the combined flow from all active SVE wells, and the air flow at the blower effluent;
- Measurement of vacuum in each operating SVE well and at the manifold combining all active SVE wells; and
- Recording of process data including system operation time, temperatures at the blower influent, blower exhaust, and granular activated carbon ("GAC") contactor influent locations; pressures; SVE wells on- and off-line; carbon monitoring and change-out data; monitoring the liquid level in the moisture separator at each blower influent; and maintenance activities.

Quarterly monitoring of the SVE systems consists of the following activities:

- Periodic sampling of extracted vapors from SVE wells for VOC analysis by EPA Method TO-15; and
- Periodic sampling of combined vapors extracted from all active SVE wells at the blower influent for VOC analysis by EPA Method TO-15.

Field monitoring data for the combined Central Building P and Oil Staging SVE systems are presented on Tables 10 and 11, respectively. Summary tables of monitoring data recorded for individual wells are presented on tables C1 through C7 in Appendix C. Copies of field operation data sheets prepared by Drewelow Engineering during their Site visits are also presented in Appendix C.

During this reporting period the Oil Staging SVE system had three unscheduled shutdowns due to full SVE vapor drums. The system was shutdown for approximately 14 hours between 5 November and 6 November 2003, 6 hours on 18 November 2003, and 4 hours on 15 December 2003. Additionally, there was one outage, likely caused by a power surge, for approximately 100 hours between 28 November and 1 December 2003. There were no unscheduled shutdowns of the Central Building P SVE system during this reporting period. Both systems were shut down for rebound testing on 23 December 2003.

5.3 Soil Vapor Extraction Well and System Influent Sampling

EKI collected soil vapor samples for laboratory analysis from the undiluted blower influents (i.e., the combined total influent of the SVE wells for each system) and from each of the seven SVE wells at the Site on two occasions during this reporting period. The first sampling event took place on 31 October 2003 and 5 November 2003. The second event occurred on 18 December 2003. Duplicate soil vapor samples were collected from the undiluted blower influents for the Oil Staging Area system on 31 October 2003 and Central Building P Area system on 18 December 2003. Soil vapor samples were collected in Summa canisters, labeled with a unique sample identification number, and transported to Calscience Environmental Laboratories of Garden Grove, California under appropriate chain-of-custody documentation. Samples were analyzed for VOCs using EPA Method TO-15. Analytical results for the samples are summarized in Table 12. Copies of analytical laboratory reports are presented in Appendix B.

5.3.1 Soil Vapor Extraction Wells

During this reporting period, several VOCs were detected in samples of soil vapor collected from extraction wells PSVE-1 through PSVE-7 (Table 12). PCE was detected at concentrations above 1 ug/L in each of the extraction wells during this reporting period (concentrations ranged between 1.5 ug/L at well PSVE-7 on 18 December 2003 and 22 ug/L at well PSVE-6 on 31 October 2003). Other VOCs detected above 1 ug/L during this reporting period were 1,1,1-TCA in well PSVE-4 at 1.2 ug/L; and TCE in wells PSVE-1 at 1.6 ug/L on 5 November 2003 and PSVE-4 at 2.4 ug/L and 1.4 ug/L on 5 November and 18 December 2003, respectively. In general, these concentrations are lower than concentrations detected during the previous sampling of SVE wells in August 2003.

5.3.2 SVE Blower Influent

During this reporting period, several VOCs were detected in influent soil vapor samples to the SVE system blowers (Tables 10, 11, and 12). Similar to VOCs detected in individual extraction wells, the blower influent for the Central Building P SVE system detected PCE (15 ug/L on 5 November 2003 and 17 ug/L on 18 December 2003) and TCE (1.0 ug/L on 18 December 2003) at concentrations above 1.0 ug/L. PCE was the only VOC detected above 1 ug/L in the samples of blower influent from the Oil Staging area (at concentrations of 23 ug/L and 11 ug/L on 5 November and 18 December 2003, respectively).

5.3.3 Quality Assurance/Quality Control ("QA/QC")

Standard laboratory QA/QC procedures used for the project included analyses of laboratory duplicates and method blanks. The relative percentage differences ("RPDs") of the laboratory control sample duplicates were within acceptable ranges. No analytes were detected in the method blank samples for this project. Laboratory QA/QC results are provided with the laboratory reports included in Appendix B.

Duplicate soil vapor samples were collected from the undiluted blower influent for the Oil Staging system on 31 October 2003 and Central Building P Area system on 18 December 2003 (see Table 12). The RPDs for PCE were 35.8 and 6.1, respectively, which lies in the acceptable range of sampling and analytical reproducibility, particularly for samples derived from multiple sources (in this case, from several extraction wells).

5.4 VOC Mass Removal

The VOC concentrations detected in vapor samples collected from the SVE wells and the air flow rates (in standard cubic feet per minute) are used to estimate VOC mass removal rates for each day the SVE systems were monitored. These calculations were performed for each individual SVE well and for the combined flow from all active SVE wells (Tables C1 through C7 in Appendix C and Tables 10 and 11). Figures 18 and 19 present a summary of the estimated VOC mass removal rates for the Central Building P and Oil Staging Area SVE systems, respectively.

At the startup of continuous operations in September 2002, VOC mass removal rates were over 60 pounds per day in the Central Building P SVE system and nearly 120 pounds per day in the Oil Staging Area SVE system (Tables 10 and 11). With continued operation of the SVE systems, these mass removal rates have dropped to a fraction of the rates seen at the beginning of operations. As reported in the last quarterly report (EKI, 2003c), VOC mass removal rates were estimated to be approximately 0.5 pound per day for the Central Building P SVE system and 0.7 pounds per day for the Oil Staging Area SVE system in August 2003. During the past three months of operation the mass removal rate at the Central Building P SVE system has been reduced to approximately 0.3 pounds per day, while the mass removal rate at the Oil Staging Area SVE system has been reduced to approximately 0.2 pounds per day.

As of 23 December 2003, more than 2,000 pounds of VOCs had been collectively extracted from both the Central Building P Area (1,130 pounds) and Oil Staging Area (900 pounds) SVE systems since startup (see Tables 10 and 11 and Figures 20 and 21). As shown on these figures, the majority of VOC mass removed from both systems consists of PCE.

5.5 SVE Adjustments Based on VOC Data

No adjustments to SVE system flow rates were made during the third quarter of 2003.

5.6 Permit Compliance

During this reporting period, the effluent of each SVE system was monitored with a PID on a weekly basis to demonstrate conformance with the limitations of the SCAQMD permits for the systems. The SCAQMD permits require total VOC concentrations at the inlet of the primary carbon contactor (denoted *Average Influent C1* in Tables 13 and 14) to remain below 5,000 parts per million by volume ("ppmv"), measured as hexane. The SCAQMD permits also impose limits on the outlet of the secondary carbon contactor (denoted *Average Effluent C2* in Tables 13 and 14); total VOC concentrations in this outlet stream cannot exceed 5 ppmv, and PCE and TCE concentrations must remain below 0.5 ppmv. Data presented in these tables show that both systems have consistently complied with the limitations of the SCAQMD permits.

The SCAQMD permits also require the primary carbon contactors to be changed when the total VOC concentration at the outlet of the primary carbon contactor reaches 50 ppmv. This value is denoted as *Average Effluent C1* in Tables 13 and 14. The maximum VOC concentration recorded during this reporting period in either system was 9.0 ppmv, as measured using a PID calibrated with hexane (Oil Staging Area, 14 and 30 October 2003). Both systems have consistently met this permit condition.

One GAC change out was performed during this reporting period (Oil Staging Area, 30 October 2003). This change out was performed in accordance with permit requirements. At the time of this report, five drums of spent GAC are being temporarily stored in a secure facility onsite, pending laboratory analysis and disposal at an off-Site permitted facility.

5.7 Changes in VOC Concentrations in Soil and Soil Vapor

A primary objective of the SVE systems is to reduce the VOC concentration in soil and soil vapor at the Site. Several rounds of vapor sampling have been completed since start-up of SVE operations to track the progress of VOC removal with the most recent sampling of all soil vapor monitoring wells at the Site conducted between 15 and 22 December 2003. Results of soil vapor sampling are discussed in Section 5.7.1 below.

5.7.1 Changes in VOC Concentrations in Soil Vapor Due to SVE System Operation

Table 15 summarizes analytical data for soil vapor samples collected from all soil vapor monitoring wells at the Site. Figure 22 shows PCE concentrations in soil vapor for the newly installed vapor probe locations located at a depth of approximately 5 ft bgs. Figure 23 shows the reduction of PCE concentrations in soil vapor for selected monitoring periods beginning with July 2002 (prior to the start of SVE operation at the Site) through December 2003 (after more than 15 months of SVE operation), with the most recent data being represented in the last column of figures.

PCE concentrations in soil vapor have dropped significantly in all wells at the Site from July 2002 to December 2003. While data from July 2002 indicated that all sampling points other than those around the periphery of the Site had a PCE concentration in soil vapor above 100 ug/L, there were only three locations in December 2003 that had PCE concentrations in soil vapor above this level: SVMW-201 (in the Oil Staging Area) at 101 ug/L and 160 ug/L at the shallow and mid-level probes, respectively, PMW-13 at 130 ug/L at the deep probe and SVMW-219 (one of the new 5-foot deep vapor monitoring wells) at 330 ug/L.

In Central Building P, most of the samples collected from all three probe depths are near or below laboratory reporting limits for PCE. Before start-up of SVE operation, samples from well SVMW-202 had contained the highest concentrations of PCE in soil vapor at the Site, with detected concentrations up to 86,000 ug/L in July 2002. In December 2003, the highest concentration of PCE in well SVMW-202 was 11 ug/L in the mid-level probe, with concentrations of 3.1 ug/L and 2.8 ug/L, respectively, in shallow and deep probes. Similar reductions have been observed in all of the probe locations around the Central Building P SVE system. Such substantial reduction in PCE concentrations in soil vapor in this area indicates that removal of VOCs from the soil and soil vapor is nearing the limit of SVE technology to effectively remove these compounds.

In the Oil Staging Area, the concentration of detectable PCE in all monitoring wells have declined to 10 ug/L or less, with the exception of well SVMW-201 and PMW-12 (the deep probe only at 13 ug/L). Concentrations of PCE in soil vapor at the shallow probe depth of SVMW-201 have declined from 14,800 ug/L prior to the start of SVE to 101 ug/L in December 2003, concentrations at the mid-level probe have declined from 18,900 ug/L before the start of SVE to 160 ug/L in December 2003, and concentrations in the deep probe have declined from 22,600 ug/L prior to the start of SVE to 29 ug/L in December 2003.

Outside of the Central Building P and Oil Staging Areas, only soil vapor samples collected from the deep probes in wells PMW-9 and PMW-13 contain PCE above the remediation goal of 83 ug/L. In general, PCE concentrations in probes at PWM-9 have declined. PCE concentrations in probes at well PMW-13 have begun to show some decline over the past two quarters. Vacuum testing prior to the start of continuous operations of the systems indicated that the systems exerted an influence over the entire

Site; however, since these two wells lie relatively far from either of the SVE systems, it may take longer for vapor to migrate from these wells to the SVE systems.

Figure 24 shows the distribution of PCE in soil gas in two cross-sections across the Site and demonstrates that the areas of elevated PCE concentrations in soil vapor across the Site have substantially diminished. Elevated concentrations of PCE remain only at new shallow SVMW-19, the mid-level depth in Oil Staging Area, and near the deep probes (of PMW-9 and PMW-13) in the southwest corner of the Site.

5.7.2 Changes in VOC Concentrations in Soil Due to SVE System Operation

During field activities conducted in October 2003 for installation of 10 new groundwater monitoring wells and soil borings for the leaching study, soil samples were collected and analyzed for VOCs to aid in assessment of the SVE systems performance. Analytical data are summarized in Table 16. Two of these borings were advanced in the Central Building P Area and results of those VOC soil samples are summarized below.

At Central Building P, a total of 14 soil samples were collected from two different borings (BldgP-LAR-2 and BldgP-LAR-3; see Figure 2). None of the identified primary VOCs were detected in samples collected from boring BldgP-LAR-2. PCE and TCE were detected in soil sample BldgP-LAR-3 (at a depth of 25-26.5 ft bgs) at 1.3 mg/kg and 0.0021 mg/kg, respectively. PCE was detected at low concentrations in 9 other samples (concentrations ranging between 0.0053 mg/kg to 0.059 mg/kg) and was non-detect in the remaining 4 samples analyzed. Estimated concentrations of TCE were detected in 3 other samples at concentrations ranging between 0.00031 to 0.00068 mg/kg; the remaining 10 samples had no detectable TCE. Low concentrations of other VOCs were also detected (see Table 16). Boring BldgP-LAR-3 is located near boring W-25 which was advanced prior to startup of the SVE system. For comparison purposes, the deepest soil sample collected at boring W-25 (at a depth of 20 ft bgs) had a PCE concentration of 6.31 mg/kg.

No borings were advanced the Oil Staging Area during the October field activities.

5.8 Plans for Continued SVE Systems Operation

The SVE systems were shutdown on 23 December 2003 to begin rebound testing. The SVE systems will remain off for a minimum of one month while rebound testing is performed. When rebound testing is completed and the analytical data evaluated, a recommendation will be made to the RWQCB either (a) to cease operation of the SVE systems or (b) to continue operation of the systems.

6 FHP COLLECTION

FHP collection in the vicinity of Building A was initiated in late 1995 with the removal of FHP from well MW-1. The FHP collection system was expanded when wells MW-2 and MW-3 were installed in 1998. In September 2002, two new FHP collection wells (PMW-16 and PMW-18) and one new soil vapor monitoring/FHP collection well (PMW-17) were constructed inside Building A to delineate the lateral extent of FHP on groundwater and to collect FHP. Locations of the FHP collection wells are shown on Figure 2. In total more than 5,500 gallons of FHP have been collected at the Site since December 1995.

6.1 FHP Collection – Fourth Quarter 2003

Cornerstone Environmental Contractors, Inc. ("Cornerstone") of San Clemente, California, a state-of-California licensed remediation contractor, has been retained by EKI on behalf of Price Pfister to construct the automated FHP collections system. During the third and fourth quarters of 2003, Cornerstone and EKI have been coordinating with the Los Angeles County Fire Department ("LAFD") to obtain a permit for operation of an automated FHP system. It was necessary for the RWQCB to prepare a written letter to the LAFD prior to approval of the permit. As of December 2003, this permit was obtained and construction of the automated system started on 6 January 2003.

In preparation for system automation, the total fluids pump from each FHP collection well was removed for maintenance and cleaning at the end of the third quarter 2003. In addition, materials were brought to the Site such that installation of the system could begin immediately upon approval of the permit. Due to the time necessary to obtain an LAFD permit, the FHP recovery permits were not reinstalled and no FHP was collected during the fourth quarter 2003. Tables 17 and 18 summarize the measured FHP thickness in each well and FHP volumes collected from each well between January 2003 and December 2003. The automated FHP collection system is expected to be operational during January 2004.

6.2 Collection and Analysis of FHP Samples

On 24 October 2003, FHP samples from wells PMW-16, PMW-17, and PMW-18-were collected by Blaine Tech and submitted for chemical analysis. Prior to sample collection, the depth to free product, depth to water, and thickness of free product was measured in each well. FHP samples were collected in disposable bailers then transferred to pre-cleaned, laboratory supplied sample containers. The well was not purged prior to sample collection. Well sampling forms and associated field notes are included in Appendix B.

FHP samples were analyzed for the following:

- VOCs, including 1,2,3-TCP by EPA Method 8260B,
- SVOCs, including NDEA and NDMA,

- TEPH by EPA Method 8015M,
- TPH with carbon range distinction, and
- Sixteen metals by EPA Method 3050/6020 and mercury by EPA Method 7471A.

FHP analytical testing results are summarized in Tables 19 through 23.

6.3 Analytical Testing Results

6.3.1 VOCs

As summarized in Table 19, the PCE, 1,1,1-TCA, TCE, and 1,1-DCE were detected above the MDL in all three FHP samples collected during the fourth quarter 2003 groundwater monitoring event. PCE was detected at concentrations between 22 mg/kg and 310 mg/kg, 1,1,1-TCA between 29 mg/kg and 47 mg/kg, TCE between 0.78 mg/kg (estimated value) and 3.7 mg/kg, and 1,1-DCE between 4.8 mg/kg and 9.9 mg/kg.

Low concentrations of the following VOCs were also detected in the fourth quarter 2003 samples: 1,1-DCA, ethylbenzene, total xylenes, sec-butylbenzene, isopropylbenzene, p isopropyltoluene, naphthalene, carbon disulfide, n-propylbenzene, 1,2,4 trimethylbenzene, and 1,3,5-trimethylbenzene. Methylene chloride and 2-butanone, common lab contaminants, were also detected above the MDL but below the laboratory RL. However, these analytes were also detected in the associated laboratory method blank.

6.3.2 Emergent Chemicals

As summarized in Table 20, emergent chemicals 1,2,3-TCP and NDEA were not detected above the MDLs in any of the three FHP samples collected during the fourth quarter 2003 monitoring event. In addition, no NDMA was detected in any of the FHP samples above its MDL of 3.1 mg/kg.

6.3.3 SVOCs

As summarized in Table 21, only bis (2-ethylhexyl) phthalate was detected above the method limit in any of the three FHP samples collected during the fourth quarter 2003 monitoring event. Bis (2-ethylhexyl) phthalate was detected in the FHP samples collected from wells PMW-17 and PMW-18 at concentrations of 250 mg/kg and 66 mg/kg, respectively.

6.3.4 Petroleum Hydrocarbons

The results of TEPH analyses are presented in Table 22. The carbon distribution range for the FHP is also provided in Table 22.

6.3.5 Inorganic Compounds

As summarized in Table 23, barium, cadmium, chromium, cobalt, copper, lead, nickel, silver, vanadium, and zinc were detected above MDLs in one or more of the FHP samples collected during the fourth quarter monitoring event.

7 PROGRESS OF SITE REMEDIATION ACTIVITIES

Activities performed during this quarter continue to show progress in site remediation.

Soil Vapor Extraction and In Situ Air Sparging: Concentrations of PCE and other VOCs have been reduced across much of the Site. The SVE systems have been operational at the Site since September 2002. The IAS systems have been operational since June 2003. Both the SVE and IAS systems were shut down on 23 December 2003 for performance rebound testing. This testing is being performed in accordance with the *Work Plan for Rebound Testing of Soil Vapor Extraction and In Situ Air Sparging Wells* (EKI, 2003a).

Approximately 2,030 pounds of VOCs have been removed from the subsurface by the SVE systems since September 2002, after nearly 15 months of operation. Mass removal rates for the SVE systems in Central Building P and Oil Staging Areas seem to be nearing asymptotic levels.

To provide a baseline for evaluation of SVE performance, all soil vapor monitoring wells at the Site were sampled prior to startup of the SVE systems in July 2002 (Figure 23) and quarterly thereafter. The area of the Site encompassing PCE concentrations in soil vapor greater than 100 ug/L decreased in size by approximately 99% as a result of SVE operation between July 2002 and December 2003.

Results of the groundwater sampling indicate that the IAS systems are removing VOC mass from the shallow saturated zone, as groundwater PCE concentrations in each of the five wells monitored for IAS performance declined by 76 to 98 percent, as compared with concentrations prior to IAS startup.

Rebound testing of the SVE and IAS systems will include analyses for both soil vapor and groundwater to assess their performance. The duration of the rebound test will be a minimum of one month.

FHP Collection: A cumulative total of over 5,500 gallons of FHP have been removed from the Site since December 1995. An automated collection system, currently being constructed at the Site and expected to be operational during January 2004, will allow for more frequent collection of FHP.

Tabl

Summary of Volatile Organic Chemical Analytical I

Price Pfister, Inc., 13500 Paxto

Area / Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C
Central Building P Area										
PIAS-1	5/7/2003	6.83	0.74	1.48	<0.5	1.09	<0.5	<0.5	<0.5	
PIAS-2	5/1/2003	5.17	<0.5	0.72	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-2	5/7/2003	1.59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-3	5/1/2003	13.8	<0.5	0.70	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-3	5/1/2003	13.4	<0.5	0.72	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-3	5/9/2003	4.65	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-4	5/1/2003	3.33	<0.5	0.60	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-4	5/7/2003	0.56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-5	5/1/2003	4.60	<0.5	0.88	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-5	5/6/2003	1.09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-6	5/1/2003	3.76	<0.5	0.92	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-6	5/9/2003	0.59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-13	5/7/2003	50.1	0.82	2.70	<0.5	1.24	<0.5	<0.5	<0.5	
PIAS-13	5/7/2003	49.8	0.81	2.62	<0.5	1.18	<0.5	<0.5	<0.5	
PMW-23	12/5/2002	1,480	<20	<20	<20	28.1	<20	<20	<40	
PMW-23	12/5/2002	1,400	<20	<20	<20	27.3	<20	<20	<40	
PMW-23	1/8/2003	1,470	16.4	11.3	<5.0	31.3	<5.0	<5.0	10.4	
PMW-23	4/28/2003	806	<10	<10	<10	<10	<10	<10	<10	
PMW-23	5/9/2003	513	7.53	7.06	<5.0	10.3	<5.0	<5.0	<5.0	
PMW-23	5/9/2003	504	7.16	6.72	<5.0	10.0	<5.0	<5.0	<5.0	
PMW-23	6/26/2003	25.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-23	7/10/2003	66.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-23	8/7/2003	10.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

ble 3

Results for Groundwater Through December 2003 [1] [2]

xton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.54	<0.5	<0.5	<0.5	<0.5	<0.5	Bromoform = 0.53; Dibromochloromethane = 0.8	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Bromoform = 0.57; Dibromochloromethane = 0.87.	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Dibromochloromethane = 0.82	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Bromodichloromethane = 0.79; Bromoform = 1.5; Dibromochloromethane = 2.02	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Bromodichloromethane = 0.59; Bromoform = 0.67; Dibromochloromethane = 1.2	
0.74	<0.5	<0.5	<0.5	<0.5	<0.5	Bromodichloromethane = 1.13; Bromoform = 1.46; Dibromochloromethane = 2.68	
0.71	<0.5	<0.5	<0.5	<0.5	<0.5	Bromodichloromethane = 1.05; Bromoform = 0.98; Dibromochloromethane = 1.91	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Bromodichloromethane = 0.73; Bromoform = 2.02; Dibromochloromethane = 2.27	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Bromoform = 0.75; Chloromethane = 0.54; Dibromochloromethane = 1.0	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<20	<20	<20	<20	<20	<20	ND	
<20	<20	<20	<20	<20	<20	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<10	<10	<10	<10	<10	<10	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	

Table

Summary of Volatile Organic Chemical Analytical R

Price Pfister, Inc., 13500 Paxton

Area Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C
PMW-23	8/7/2003	11.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-23	9/3/2003	11.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-23	10/23/2003	7.60	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
PMW-23	12/16/2003	11	<0.46	<0.48	<0.56	<0.32	<0.40	<0.35	<0.90	
PMW-24	12/5/2002	600	21.4	<5.0	<5.0	18.2	<5.0	<5.0	<10	
PMW-24	1/8/2003	790	31.4	7.23	<5.0	33.5	<5.0	<5.0	<10	
PMW-24	4/28/2003	98.0	2.94	2.07	<0.5	3.39	<0.5	<0.5	<0.5	
PMW-24	5/9/2003	82.9	3.17	2.19	<0.5	4.05	<0.5	<0.5	<0.5	
PMW-24	6/26/2003	37.3	1.40	1.51	<0.5	1.86	<0.5	<0.5	<0.5	
PMW-24	7/10/2003	34.3	1.35	1.55	<0.5	1.44	<0.5	<0.5	<0.5	
PMW-24	8/7/2003	31.3	1.53	1.66	<0.5	1.87	<0.5	<0.5	<0.5	
PMW-24	9/3/2003	19.1	1.19	1.22	<0.5	1.30	<0.5	<0.5	<0.5	
PMW-24	10/23/2003	12.0	<0.46	0.87 J	<0.56	0.59 J	<0.4	<0.35	<0.9	
PMW-24	12/16/2003	6.4	<0.46	<0.48	<0.56	<0.32	<0.40	<0.35	<0.90	
PMW-25	12/5/2002	789	12.0	15.8	<5.0	21.8	<5.0	<5.0	<10	
PMW-25	1/8/2003	746	9.43	13.1	<5.0	21.2	<5.0	<5.0	<10	
PMW-25	4/28/2003	598	6.35	12.7	<5.0	11.3	<5.0	<5.0	<5.0	
PMW-25	4/28/2003	587	6.29	13.0	<5.0	10.8	<5.0	<5.0	<5.0	
PMW-25	5/9/2003	540	7.99	14.1	<5.0	13.2	<5.0	<5.0	<5.0	
PMW-25	6/26/2003	341	5.70	14.5	4.12	9.05	<2.5	<2.5	<2.5	
PMW-25	7/10/2003	210	5.12	12.2	4.15	6.69	2.48	<2.0	<2.0	
PMW-25	8/7/2003	225	5.38	13.7	4.56	9.00	2.56	<2.5	<2.5	
PMW-25	9/3/2003	198	5.34	14.7	6.38	7.99	2.58	<2.0	<2.0	
PMW-25	10/23/2003	130	4.5	15	8.1	6.2	2.8	<0.35	<0.9	
PMW-25	10/23/2003	130	4.5	15	7.9	5.3	2.7	<0.35	<0.9	
PMW-25	12/16/2003	91	3.4	12	9.5	6.3	2.6	<0.35	<0.90	
PMW-26	12/6/2002	333	8.67	36.1	19.0	15.3	6.34	<4.0	<8.0	
PMW-26	1/8/2003	185	6.18	34.7	21.2	12.1	4.96	<2.5	<5.0	
PMW-26	4/28/2003	138	4.04	17.8	29.5	7.21	3.38	<2.0	<2.0	
PMW-26	5/8/2003	144	5.96	21.9	14.8	10.3	4.71	<2.0	<2.0	

ble 3

l Results for Groundwater Through December 2003 [1] [2]

xton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Freon 113 = 1.3	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Freon 113 = 1.2	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	
0.70 J	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.65 J; Freon 113 = 1.4	DUP-4
0.71 J	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.60 J; Freon 113 = 1.4	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	ND	
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	

Table

Summary of Volatile Organic Chemical Analytical R

Price Pfister, Inc., 13500 Paxton

Area / Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C
PMW-26	5/8/2003	128	5.38	18.8	13.4	9.11	4.10	<2.0	<2.0	
PMW-26	8/7/2003	73.6	5.92	25.0	30.9	7.62	5.64	<0.5	<0.5	
PMW-26	10/23/2003	44.0	5.1	22	64	5.6	7.2	<0.35	<0.9	
PMW-28	10/28/2003	8.0	<0.46	2.5	0.87 J	0.95 J	<0.4	<0.35	<0.9	
PMW-29	10/28/2003	14	1.3	4.9	5.4	1.9	0.97 J	<0.35	<0.9	
PMW-30	10/28/2003	47	4.0	14	17	4.6	3.4	<0.35	<0.9	
PMW-30	10/28/2003	47	4.0	14	17	5.5	3.4	<0.35	<0.9	
PMW-31	10/31/2003	13	<0.46	1.4	0.74 J	0.42 J	<0.4	<0.35	<0.9	
PMW-32	10/31/2003	4.9	0.49 J	1.4	<0.56	0.78 J	<0.4	<0.35	<0.9	
Building A Area										
MW-4	3/8/2002	50.8	13.4	1.51	<0.5	8.63	<0.5	<0.5	<0.5	
MW-4	6/5/2002	80.2	13.7	4.39	<1.0	12.4	<1.0	<1.0	<1.0	
MW-4	8/12/2002	75.5	18.1	2.53	<1.0	15.5	<1.0	<1.0	<2.0	
MW-4	11/8/2002	43.7	10.2	1.51	<0.5	8.98	<0.5	<0.5	<1.0	
MW-4	1/7/2003	46.7	9.09	1.55	<0.5	9.90	<0.5	<0.5	<1.0	
MW-4	5/8/2003	50.7	9.23	1.64	<0.5	7.82	<0.5	<0.5	<0.5	
MW-4	8/4/2003	NS	NS	NS	NS	NS	NS	NS	NS	
MW-4	10/22/2003	28	3.1	1.4	<0.56	2.0	<0.4	<0.35	<0.9	
MW-5	3/8/2002	3,210	60.4	26.5	<20	39.3	<20	<20	<20	
MW-5	6/5/2002	1,980	33.3	26.0	20.8	26.5	<20	<20	<20	
MW-5	8/14/2002	333	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	
MW-5	11/8/2002	241	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<8.0	
MW-5	11/8/2002	307	<5.0	<5.0	<5.0	5.11	<5.0	<5.0	<10	
MW-5	1/8/2003	238	2.67	2.81	<2.5	4.45	<2.5	<2.5	<5.0	
MW-5	5/5/2003	NS	NS	NS	NS	NS	NS	NS	NS	
MW-5	8/7/2003	263	2.80	11.2	7.15	3.45	<2.5	<2.5	<2.5	

ble 3

l Results for Groundwater Through December 2003 (1) (2)

xton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	
0.97	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.89 J	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.71 J; Freon 113 = 1.2	
1.1	<0.27	<0.29	0.82 J	<0.19	<0.17	Bromodichloromethane = 0.79 J; Dibromochloromethane = 1.1	
0.61 J	<0.27	<0.29	<0.35	<0.19	<0.17	Naphthalene = 0.64 J	
1.1	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
1.0	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.61 J	DUP-5
0.46 J	<0.27	<0.29	<0.35	<0.19	<0.17	Acetone = 5.8 JB; Methylene Chloride = 2.0 JB; MTBE = 0.33 J	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Acetone = 5.2 JB; Methylene Chloride = 2.0 JB; MTBE = 0.32 J	
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
<1.0	<1.0	<1.0	3.08	1.09	2.40	ND	
<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
NS	NS	NS	NS	NS	NS	ND	(3)
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.38 J	
<20	<20	<20	<20	<20	<40	1,2-DCB = 23	
<20	<20	<20	<20	<20	<40	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<10	ND	
<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND	
NS	NS	NS	NS	NS	NS	ND	(3)
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND	

Tabl

Summary of Volatile Organic Chemical Analytical I

Price Pfister, Inc., 13500 Paxto

Area Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C
MW-5	10/22/2003	140	1.8	11	8.8	2.1	1.4	<0.35	<0.9	
MW-6	3/8/2002	24.9	0.95	1.89	1.45	0.65	<0.5	<0.5	<0.5	
MW-6	6/5/2002	55.3	<1.0	4.13	1.83	<1.0	<1.0	<1.0	<1.0	
MW-6	8/13/2002	18.6	0.80	1.18	0.78	0.66	<0.5	<0.5	<1.0	
MW-6	8/13/2002	18.1	0.74	1.11	0.76	0.62	<0.5	<0.5	<1.0	
MW-6	11/8/2002	13.1	<0.5	0.59	<0.5	<0.5	<0.5	<0.5	<1.0	
MW-6	1/7/2003	26.0	0.93	6.27	<0.5	2.13	<0.5	<0.5	<1.0	
MW-6	5/6/2003	19.5	<0.5	1.28	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-6	5/6/2003	19.6	<0.5	1.37	<0.5	0.95	<0.5	<0.5	<0.5	
MW-6	8/5/2003	32.3	0.78	2.30	<0.5	1.70	<0.5	<0.5	<0.5	
MW-6	10/21/2003	28	<0.46	2.4	<0.56	1.5	<0.4	<0.35	<0.9	
MW-7	3/8/2002	197	20.6	2.17	<1.0	9.34	1.15	<1.0	<1.0	
MW-7	3/8/2002	190	18.2	1.92	<1.0	8.17	<1.0	<1.0	<1.0	
MW-7	6/5/2002	170	12.5	4.91	<1.0	9.92	<1.0	<1.0	<1.0	
MW-7	8/12/2002	195	10.5	2.37	<2.0	9.89	<2.0	<2.0	<4.0	
MW-7	8/12/2002	188	10.0	2.20	<2.0	9.52	<2.0	<2.0	<4.0	
MW-7	11/8/2002	245	14.9	<4.0	<4.0	10.6	<4.0	<4.0	<8.0	
MW-7	1/8/2003	557	21.1	<5.0	<5.0	22.6	<5.0	<5.0	<10	
MW-7	5/8/2003	818	22.3	5.54	<5.0	<5.0	<5.0	<5.0	<5.0	
MW-7	8/6/2003	689	18.1	5.02	<5.0	16.9	<5.0	<5.0	<5.0	
MW-7	8/6/2003	651	17.9	<5.0	<5.0	15.8	<5.0	<5.0	<5.0	
MW-7	10/22/2003	290	10.0	3.80	<0.56	9.7	0.90 J	<0.35	<0.9	
MW-7	10/22/2003	310	10	3.9	<1.1	9.8	0.84 J	<0.7	<1.8	
MW-8	3/8/2002	60.0	29.5	3.33	<0.5	20.8	<0.5	<0.5	<0.5	
MW-8	6/5/2002	78.1	22.2	5.74	<1.0	22.9	<1.0	<1.0	<1.0	
MW-8	6/5/2002	84.5	24.2	6.31	<1.0	25.4	<1.0	<1.0	<1.0	
MW-8	8/13/2002	47.8	22.3	3.46	<0.5	23.0	<0.5	<0.5	<1.0	
MW-8	11/8/2002	38.8	15.9	3.06	<0.5	16.2	<0.5	<0.5	<1.0	
MW-8	1/6/2003	46.6	15.2	3.41	<0.5	14.9	<0.5	<0.5	<1.0	
MW-8	1/6/2003	47.7	15.8	3.65	<0.5	17.8	<0.5	<0.5	<1.0	

ble 3

l Results for Groundwater Through December 2003 [1] [2]

xton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.67 J; Tert-Butyl Alcohol (TBA) = 6.4 J; 1,1,2,2-Tetrachloroethane = 0.51 J	
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
<1.0	<1.0	<1.0	3.70	1.24	3.78	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	ND	
<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	ND	
<1.0	<1.0	<1.0	3.53	1.21	3.79	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	ND	
<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND	
0.50 J	0.38 J	<0.29	<0.35	<0.19	<0.17	MTBE = 0.50 J	DUP-3
<0.9	<0.55	<0.58	<0.7	<0.39	<0.34	ND	
0.52	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
<1.0	<1.0	<1.0	3.29	1.12	2.48	ND	
<1.0	<1.0	<1.0	3.39	1.21	3.64	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.58	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.60	<0.5	<0.5	<0.5	<0.5	<0.5	ND	

Table

Summary of Volatile Organic Chemical Analytical R

Price Pfister, Inc., 13500 Paxton

Area / Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C
MW-8	5/5/2003	52.3	15.9	3.11	<0.5	1.76	<0.5	<0.5	<0.5	
MW-8	5/5/2003	54.3	16.7	3.19	<0.5	2.35	<0.5	<0.5	<0.5	
MW-8	8/5/2003	62.9	17.3	3.84	<0.5	15.3	0.57	<0.5	<0.5	
MW-8	10/20/2003	47	11	3.4	<0.56	7.6	0.63 J	<0.35	<0.9	
PMW-14	10/22/2002	61.3	21.5	2.63	<0.5	19.2	<0.5	<0.5	<1.0	
PMW-14	11/8/2002	49.5	17.4	2.33	<0.5	15.3	<0.5	<0.5	<1.0	
PMW-14	1/7/2003	75.0	19.7	3.15	<0.5	23.5	<0.5	<0.5	<1.0	
PMW-14	1/7/2003	73.9	20.2	3.11	<0.5	24.2	<0.5	<0.5	<1.0	
PMW-14	5/7/2003	73.4	20.9	3.84	<0.5	20.1	0.77	<0.5	<0.5	
PMW-14	8/5/2003	76.2	18.1	4.87	<0.5	15.5	1.23	<0.5	<0.5	
PMW-14	8/5/2003	76.1	18.6	4.82	<0.5	15.8	1.18	<0.5	<0.5	
PMW-14	10/21/2003	61	13	5.7	<0.56	9.8	1.3	<0.35	<0.9	
PMW-21B	12/5/2002	3.20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
PMW-21B	1/6/2003	2.57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
PMW-21B	5/6/2003	3.97	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-21B	8/5/2003	4.84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-21B	10/20/2003	4.6	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
PMW-21B	10/20/2003	4.8	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
Oil Staging Area										
PIAS-7	4/29/2003	3.54	<0.5	1.64	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-7	5/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-8	4/29/2003	2.36	<0.5	0.89	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-8	5/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-9	4/29/2003	1.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-9	5/9/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-10	4/29/2003	1.14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-10	5/9/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-11	4/28/2003	0.98	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

ble 3

l Results for Groundwater Through December 2003 (1) (2)

xton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
0.55	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.60	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.60	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.54 J	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 2.2 JB; MTBE = 0.79 JB	
0.61	0.64	<0.5	<0.5	<0.5	<0.5	ND	
0.54	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.58	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.61	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.63	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.60	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.62	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.51 J	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.44 J	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 2.6 JB; MTBE = 0.57 JB	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 2.3 JB	DUP-1
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	0.67	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.54	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	

Table

Summary of Volatile Organic Chemical Analytical R

Price Pfister, Inc., 13500 Paxton

Area Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C
PIAS-11	5/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-12	4/29/2003	0.92	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-12	4/29/2003	0.88	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PIAS-12	5/9/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-11	8/14/2002	1,320	<20	30.4	<20	<20	<20	<20	<40	
PMW-11	8/14/2002	1,260	<20	28.7	<20	<20	<20	<20	<40	
PMW-11	11/7/2002	843	<10	21.2	<10	<10	<10	<10	<20	
PMW-11	1/8/2003	395	5.86	12.2	4.72	10.6	<2.5	<2.5	<5.0	
PMW-11	4/28/2003	178	<2.0	4.76	<2.0	3.15	<2.0	<2.0	<2.0	
PMW-11	5/8/2003	135	2.12	4.50	2.24	3.30	<2.0	<2.0	<2.0	
PMW-11	6/26/2003	64.0	<0.5	1.12	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-11	7/10/2003	36.8	<0.5	0.68	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-11	7/10/2003	41.0	<0.5	0.64	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-11	8/7/2003	34.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-11	9/3/2003	29.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-11	9/3/2003	32.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-11	10/23/2003	17	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
PMW-11	12/16/2003	11	<0.46	<0.48	<0.56	<0.32	<0.40	<0.35	<0.90	
PMW-11	12/16/2003	10	<0.46	<0.48	<0.56	<0.32	<0.40	<0.35	<0.90	
PMW-22	12/6/2002	58.4	1.26	3.75	1.75	2.39	<0.5	<0.5	<1.0	
PMW-22	12/6/2002	54.0	1.17	3.46	1.85	2.12	<0.5	<0.5	<1.0	
PMW-22	1/7/2003	12.8	<0.5	1.70	<0.5	3.30	<0.5	<0.5	<1.0	
PMW-22	4/28/2003	5.69	<0.5	1.22	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-22	5/7/2003	4.12	<0.5	1.15	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-22	6/26/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-22	6/26/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-22	7/10/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-22	8/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-22	9/3/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PMW-22	10/21/2003	0.83 J	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	

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Results for Groundwater Through December 2003 [1] [2]

ton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
0.98	<0.5	<0.5	<0.5	<0.5	<0.5	Bromodichloromethane = 1.47; Bromoform = 1.17; Dibromochloromethane = 2.39	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Bromoform = 0.67; Dibromochloromethane = 0.86	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<20	<20	<20	<20	<20	<40	ND	
<20	<20	<20	<20	<20	<40	ND	
<10	<10	<10	<10	<10	<10	ND	
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Freon 113 = 1.3	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	DUP-1
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.51	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.60	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	

Tab

Summary of Volatile Organic Chemical Analytical

Price Pfister, Inc., 13500 Paxto

Area / Well	Date	Primary VOCs (µg/L)							
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane
PMW-22	12/16/2003	<0.20	<0.46	<0.48	<0.56	<0.32	<0.40	<0.35	<0.90
Building L Area									
PMW-12	8/14/2002	11.6	<0.5	0.79	<0.5	<0.5	<0.5	<0.5	<1.0
PMW-12	11/7/2002	59.4	<1.0	1.00	<1.0	<1.0	<1.0	<1.0	<2.0
PMW-12	1/7/2003	55.7	<0.5	0.57	<0.5	<0.5	<0.5	<0.5	<1.0
PMW-12	5/7/2003	18.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PMW-12	8/6/2003	9.28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PMW-12	10/21/2003	4.0	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9
PMW-12	10/21/2003	4.1	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9
PMW-33	10/31/2003	1.3	<0.46	0.88 J	<0.56	<0.32	<0.4	<0.35	<0.9
PMW-33	10/31/2003	1.4	<0.46	0.88 J	<0.56	<0.32	<0.4	<0.35	<0.9
PMW-34	11/3/2003	0.78 J	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9
Other On-Site Locations									
A1	3/8/2002	2.76	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
A1	5/13/2002	2.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<10
A1	8/14/2002	2.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	NA
A1	11/11/2002	2.40	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	NA
A1	11/11/2002	2.50	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	NA
A1	3/17/2003	NS	NS	NS	NS	NS	NS	NS	NS
A1	5/8/2003	NS	NS	NS	NS	NS	NS	NS	NS
A1	8/5/2003	2.40	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	NA
A2	3/8/2002	375	206	293	2,434	137	83	<40	<40
A2	5/13/2002	270	170	270	3,400	140	130	<25	<500
A2	8/14/2002	290	140	230	3,000	100	69	24	NA
A2	11/11/2002	220	120	180	4,100	120	100	36	NA
A2	3/17/2003	NS	NS	NS	NS	NS	NS	NS	NS
A2	5/8/2003	NS	NS	NS	NS	NS	NS	NS	NS

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l Results for Groundwater Through December 2003 [1] [2]
xton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.54	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.49 J	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
0.56 J	<0.27	<0.29	<0.35	<0.19	<0.17	ND	DUP-2
0.52 J	<0.27	<0.29	<0.35	<0.19	<0.17	Acetone = 5.7 JB; Methylene Chloride = 2.0 JB	
0.55 J	<0.27	<0.29	<0.35	<0.19	<0.17	Acetone = 4.9 JB; Methylene Chloride = 2.0 JB	DUP-6
0.48 J	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	(4)
<1.0	<10	<0.5	<1.0	<1.0	<2.0	ND	(5)
<1.0	NA	<0.5	<1.0	<1.0	<1.0	ND	(5)
<1.0	NA	<0.50	<1.0	<1.0	<1.0	ND	(5)
<1.0	NA	<0.50	<1.0	<1.0	<1.0	ND	
NS	NS	NS	NS	NS	NS	ND	(6)
NS	NS	NS	NS	NS	NS	ND	(6)
<1.0	NA	<0.50	<1.0	<1.0	<1.0	ND	(7)
<40	<40	<40	<40	<40	<80	1,2-DCB = 54.8	(4)
<50	<500	<25	<50	<50	<100	ND	(5)
3.40	NA	5.80	<1.0	<1.0	1.10	s-BB=2.1; IPB=5; t-1,2-DCE=8.7; 1,2-DCB=3.3; VC=1.7	(5)
3.30	NA	8.30	<1.0	<1.0	<1.0	s-BB=1.7; IPB=4.3; t-1,2-DCE=5.2; 1,2-DCB=3.1; VC=1.6	(5)
NS	NS	NS	NS	NS	NS	ND	(6)
NS	NS	NS	NS	NS	NS	ND	(6)

Tabl

Summary of Volatile Organic Chemical Analytical R

Price Pfister, Inc., 13500 Paxto

Area Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C
A2	8/6/2003	100	55	100	7,900	180	180	88	NA	
PMW-9	8/13/2002	18.6	1.19	6.07	<0.5	1.95	<0.5	<0.5	<1.0	
PMW-9	11/7/2002	17.7	0.74	3.89	<0.5	1.52	<0.5	<0.5	<1.0	
PMW-9	1/7/2003	14.3	<0.5	0.74	<0.5	0.63	<0.5	<0.5	<1.0	
PMW-9	5/7/2003	36.6	1.80	13.2	0.57	3.08	0.69	<0.5	<0.5	
PMW-9	8/5/2003	38.6	2.31	17.1	0.80	3.32	0.88	<0.5	<0.5	
PMW-9	10/21/2003	39	1.8	16	0.95 J	2.8	<0.4	<0.35	<0.9	
PMW-10	8/12/2002	96.4	52.7	4.29	<1.0	50.3	<1.0	<1.0	<2.0	
PMW-10	11/7/2002	80.3	45.3	3.64	<1.0	40.1	<1.0	<1.0	<2.0	
PMW-10	1/7/2003	66.8	29.8	3.21	<0.5	33.7	<0.5	<0.5	<1.0	
PMW-10	5/8/2003	19.7	7.69	1.45	<0.5	6.79	<0.5	<0.5	<0.5	
PMW-10	8/6/2003	10.0	2.47	1.21	<0.5	2.04	<0.5	<0.5	<0.5	
PMW-10	10/22/2003	5.7	0.95 J	0.83 J	<0.56	1.1	<0.4	<0.35	<0.9	
PMW-13	8/13/2002	334	6.92	11.9	6.13	10.6	<2.5	<2.5	<5.0	
PMW-13	11/7/2002	241	5.00	8.62	5.15	8.27	<4.0	<4.0	<8.0	
PMW-13	11/7/2002	261	5.39	9.33	5.28	9.32	<4.0	<4.0	<8.0	
PMW-13	1/8/2003	273	4.99	10.3	4.76	10.7	<2.5	<2.5	<5.0	
PMW-13	1/8/2003	247	4.52	9.56	4.34	9.59	<2.5	<2.5	<5.0	
PMW-13	5/8/2003	238	4.63	9.95	8.55	6.90	<2.0	<2.0	<2.0	
PMW-13	8/6/2003	214	3.60	8.88	5.91	6.83	<2.0	<2.0	<2.0	
PMW-13	10/22/2003	170	2.9	8.8	6.1	4.9	1.1	<0.35	<0.9	
PMW-15	8/12/2002	139	<2.0	9.74	4.32	<2.0	<2.0	<2.0	<4.0	
PMW-15	11/7/2002	126	<2.0	7.36	2.92	<2.0	<2.0	<2.0	<4.0	
PMW-15	1/7/2003	117	<1.0	7.13	2.21	<1.0	<1.0	<1.0	<2.0	
PMW-15	5/8/2003	71.3	<0.5	3.80	1.46	<0.5	<0.5	<0.5	<0.5	
PMW-15	8/6/2003	49.6	<0.5	2.09	0.58	<0.5	<0.5	<0.5	<0.5	
PMW-15	10/22/2003	27	<0.46	1.0	<0.56	<0.32	<0.4	<0.35	<0.9	
PMW-27	11/3/2003	46	6.9	10	<0.56	4.4	2.8	<0.35	<0.9	
PMW-27	11/3/2003	47	7.3	11	<0.56	4.5	2.8	<0.35	<0.9	

ble 3

l Results for Groundwater Through December 2003 [1] [2]

xton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
2.90	NA	12.0	<1.0	<1.0	1.1	s-BB=3.5; t-BB=1.1; IPB=9.1; t-1,2-DCE=8.0; 1,2-DCB=6.5; 1,4-DCB=1.6; VC=3.0	(7)
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<1.0	1.38	<1.0	<1.0	<1.0	<2.0	ND	
1.02	<1.0	<1.0	<1.0	<1.0	<1.0	ND	
0.70	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.35 J	
<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	ND	
<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	ND	
<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	ND	
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND	
<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	ND	
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	ND	
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND	
0.59	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
0.66	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
0.70 J	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.91 J	
0.77 J	<0.27	<0.29	<0.35	<0.19	<0.17	MTBE = 0.94 J	DUP-7

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Summary of Volatile Organic Chemical Analytical R

Price Pfister, Inc., 13500 Paxto

Area / Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C
PMW-35	11/3/2003	51	1:0	8.3	11	1.2	1.7	<0.35	<0.9	
PMW-36	11/3/2003	11	0.97 J	11	140	7.0	4.2	0.95	<0.9	
Off-Site Locations										
PMW-19	12/5/2002	4.67	<0.5	2.02	<0.5	1.42	<0.5	<0.5	<1.0	
PMW-19	1/6/2003	6.05	<0.5	2.73	<0.5	2.09	<0.5	<0.5	<1.0	
PMW-19	5/5/2003	5.06	<0.5	2.48	<0.5	1.57	<0.5	<0.5	<0.5	
PMW-19	8/4/2003	6.78	<0.5	2.89	<0.5	1.82	<0.5	<0.5	<0.5	
PMW-19	8/4/2003	6.68	<0.5	2.94	<0.5	1.89	<0.5	<0.5	<0.5	
PMW-19	10/20/2003	5.5	<0.46	2.8	<0.56	1.6	<0.4	<0.35	<0.9	
PMW-20	12/5/2002	3.27	<0.5	1.52	<0.5	0.56	<0.5	<0.5	<1.0	
PMW-20	1/6/2003	3.55	<0.5	1.53	<0.5	0.69	<0.5	<0.5	<1.0	
PMW-20	5/5/2003	3.55	<0.5	1.57	<0.5	0.52	<0.5	<0.5	<0.5	
PMW-20	8/4/2003	4.61	<0.5	1.82	<0.5	0.70	<0.5	<0.5	<0.5	
PMW-20	10/20/2003	3.8	<0.46	1.6	<0.56	0.60 J	<0.4	<0.35	<0.9	
Source Blank, Equipment Rinseate Blanks, Field Blanks, and Trip Blanks										
ERB	3/8/2002	20.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
ERB-1	6/5/2002	83.2	1.68	9.19	3.48	2.47	<1.0	<1.0	<1.0	
FB-1	8/12/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
ERB-7	8/12/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
Trip Blank	8/12/2002	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	
ERB-13	8/13/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
FB-2	8/13/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
FB-3	8/14/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
Trip Blank	8/14/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
Trip Blank	10/22/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	

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Results for Groundwater Through December 2003 (1) (2)

ton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 2.4 JB; MTBE = 0.61 JB	
0.51	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 2.2 JB; MTBE = 0.66 JB	
5.98	<0.5	<0.5	<0.5	<0.5	<1.0	Bromodichloromethane = 1.02	(8)
<1.0	<1.0	<1.0	9.95	2.60	7.64	2-butanone = 76	(8)
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	(9)
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Carbon disulfide = 15.2	(10)
<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	(10)
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	Carbon disulfide = 13.2	(9)
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	(9)
<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	

Table

Summary of Volatile Organic Chemical Analytical R

Price Pfister, Inc., 13500 Paxton

Area Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	Cl
FB-1	11/7/2002	<0.5	<0:5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
TB	11/7/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
FB-2	11/8/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
TB	11/8/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
FB-1	12/5/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
TB-1	12/5/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
TB-2	12/5/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
FB-2	12/6/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
TB-3	12/6/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
FB-1	1/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
TB-1	1/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
FB-2	1/7/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
TB-2	1/7/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
FB-3	1/8/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
TB-3	1/8/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	
FB-1	4/28/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TB-1	4/28/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
FB-2	4/29/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TB-2	4/29/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
FB-3	5/1/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TB-3	5/1/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
FB-1	5/5/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TB-1	5/5/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

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Results for Groundwater Through December 2003 (1) (2)

ton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Methyl tert-butyl ether = 1.00	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Methyl tert-butyl ether = 1.15	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	

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Summary of Volatile Organic Chemical Analytica

Price Pfister, Inc., 13500 Pa

Area / Well	Date	Primary VOCs (µg/L)							
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethan
FB-2	5/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-2	5/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-3	5/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
FB-3	5/7/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-4	5/7/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
FB-4	5/8/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SOURCE BLANK	5/8/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-5	5/8/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-6	5/8/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
FB-5	5/9/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-7	5/9/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-8	5/9/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB	6/26/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TRIP BLANK	7/10/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
FB-1	8/4/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-1	8/4/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
FB-2	8/5/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-2	8/5/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-3	8/5/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
FB-3	8/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-4	8/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB-5	8/6/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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l Results for Groundwater Through December 2003 (1) (2)

kton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
10.4	<0.5	<0.5	<0.5	<0.5	<0.5	Bromodichloromethane = 2.43; Dibromochloromethane = 1.58	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	

Tabl

Summary of Volatile Organic Chemical Analytical R

Price Pfister, Inc., 13500 Paxto

Area Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C
FB-4	8/7/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TB-6	8/7/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TB-7	8/7/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TB-1	9/3/2003	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TB-7	10/3/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
FB-1	10/20/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
TB-1	10/20/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
TB-2	10/20/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
TB-3	10/20/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
TB-4	10/20/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
TB-5	10/20/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
TB-6	10/20/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
FB-2	10/21/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
FB-3	10/22/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
FB-4	10/23/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
FB-5	10/28/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
TB-8	10/28/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
FB-6	10/31/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
FB-7	11/3/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
TB-10	11/3/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
TB-11	11/3/2003	<0.2	<0.46	<0.48	<0.56	<0.32	<0.4	<0.35	<0.9	
FB-1	12/16/2003	<0.20	<0.46	<0.48	<0.56	<0.32	<0.40	<0.35	<0.90	
TB-1	12/16/2003	<0.20	<0.46	<0.48	<0.56	<0.32	<0.40	<0.35	<0.90	

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l Results for Groundwater Through December 2003 (1) (2)

xton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Freon 113 = 1.7	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 2.8 JB	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 3.3 JB; MTBE = 0.34 JB	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 3.3 JB; MTBE = 0.34 JB	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 1.8 J	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 2.2 J	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 1.8 J	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 1.7 JB	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Methylene Chloride = 1.8 J; Freon 113 = 1.6	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	Acetone = 5.6 JB; Methylene Chloride = 2.7 JB	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	
<0.45	<0.27	<0.29	<0.35	<0.19	<0.17	ND	

Tabl

Summary of Volatile Organic Chemical Analytical R

Price Pfister, Inc., 13500 Paxto

Area / Well	Date	Primary VOCs (µg/L)								
		PCE	1,1,1-TCA	TCE	cis-1,2-DCE	1,1-DCE	1,1-DCA	1,2-DCA	Bromomethane	C

Abbreviations:

B = Analyte was present in the associated method blank
s-BB = s-butylbenzene
t-BB = t-butylbenzene
1,2-DCB = 1,2-dichlorobenzene
1,1-DCA = 1,1-dichloroethane
1,2-DCA = 1,2-dichloroethane
1,1-DCE = 1,1-dichloroethene
cis-1,2-DCE = cis-1,2-dichloroethene
t-1,2-DCE = trans-1,2-dichloroethene
DUP = duplicate sample
ERB = Equipment rinseate blank
FB = Field blank
Freon 113 = 1,1,2-Trichloro-1,2,2-Trifluoroethane
J = estimated value wherein the measured concentration is above the method detection limit bu
IPB = Isopropylbenzene
NA = Sample not tested for this analyte or result not available.
MTBE = Methyl-t-Butyl Ether
NS = Not Sampled

Notes:

(1) During the March and June 2002 sampling events, monitoring wells MW-4, MW-5, MW-6, MW-7, and MW-8 were purged and sampled using a submersible pump. Samp techniques described in EKI's Work Plan for Site Characterization and Soil Vapor Extraction Pilot Study, dated 12 June 2002. During all subsequent sampling events, dedi in accordance with low flow purging and sampling procedures described in U.S. EPA Ground Water Issue: Low-Flow (Minimal Drawdown) Ground-Water Sampling Proce Groundwater Purging and Sampling: An Overview, dated December 1995.

(2) These samples were analyzed for VOCs using EPA Methods 5030 and 8260B. Analytes not shown were not detected at or above laboratory reporting limits. Less than sym non-detectable data collected through September 2003. Method detection limits are shown for non-detectable data collected beginning since October 2003.

(3) A petroleum hydrocarbon sheen was observed; no groundwater sample was collected.

(4) EKI collected split samples from wells A1 and A2 on 8 March 2002 during sampling conducted by Arcadis Geraghty & Miller ("AGM").

(5) Data for these samples obtained from AGM, Remedial Investigation Report, Former Holchem, Inc./Chase Chemical Property, 13540 and 13546 Desmond Street, Pacoima,

(6) Wells A1 and A2 were not sampled during the first and second quarterly event of 2003, according to data transmittals from AGM, dated 9 May 2003 and 24 July 2003.

(7) Data for wells A1 and A2 provided by AGM; transmittal dated 10 December 2003.

(8) ERB and ERB-1 were collected in the field during the March and June 2002 sampling events using water supplied by the sampling subcontractor, which was also used to d the equipment and collected in the appropriate containers for chemical analysis.

(9) Field blanks analyzed during this event were collected directly from the sampling subcontractor's water supply and this water did not come in contact with the dedicated gro

(10) ERB-7 and ERB-13 were collected from rinse water passed through the dedicated pump and tubing prior to installation of this equipment in wells MW-7 and PMW-13. A 5 minutes, this water was collected in the appropriate container for chemical analysis.

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l Results for Groundwater Through December 2003 (1) (2)

xton Street, Pacoima, California

Secondary VOCs (µg/L)						Other VOCs Detected (µg/L)	Note
e Chloroform	TCFM	Benzene	Toluene	Ethyl-benzene	Total Xylenes		

it but below the reporting limit

PCE = Tetrachloroethene
1,1,1-TCA = 1,1,1-trichloroethane
TCE = Trichloroethene
TCFM = Trichlorofluoromethane
µg/L = micrograms per liter
VC = Vinyl chloride
VOC = Volatile organic compound

amples were collected during the March and June 2002 sampling events in accordance with low flow purging and sampling
dedicated bladder pumps and tubing installed in Site wells were used to collect samples from these wells
rocedures, dated December 1995, and U.S. EPA Region 9 Quick Reference Advisory – Use of Low-Flow Methods for

symbol ("<") denotes that compound was not present above the laboratory reporting or method detection limit indicated. Laboratory reporting limits are shown for

ma, California, dated 27 December 2002.

to decontaminate the sample collection equipment. After decontaminating the sample collection equipment, this water was passed through

groundwater pumps or tubing.

3. After running approximately 1/2 gallon of water supplied by the sampling subcontractor through the pump and tubing for approximately